Electronic Bid Set Workshop

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Acknowledgments

The success of the Electronic Bid Solicitation (EBS) project is due to the efforts of the members of the EBS Working Group and their participating activities. The following working group members contributed to the successful development and implementation of the EBS pilot projects: Charles Gregory of HQ USACE, Mary Diel and Lere Busch of Sacramento District, Peggy Grubbs and John Dagley of Fort Worth District, David Skar of NAVFAC Headquarters, Jim Cauthorn of NAVFAC Southwest Division, Gabriel Haduch of NCCOSC RDTE DIV San Diego, Mike Sawyer of AFMC/CECC, and Randall Lierly of AFCEE/DGA.

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The Electronic Bid Solicitation Workshop was organized and managed by Mr. Matthew Hale of the Tri-Service CADD/GIS Technology Center, located at the Information Technology Center (ITL), U.S. Army Engineer Waterways Experiment Station (WES), Vicksburg, MS.

The support of the proponents Mr. J. Justin Taylor for the Corps of Engineers, Deke Smith for the Navy, and Don Ritenour for the Air Force is appreciated.

This workshop was developed and conducted under the supervision of Harold Smith, Acting Chief Tri-Service CADD/GIS Technology Center and Dr. N. Radhakrishnan, Director, ITL.

EBS History & Background

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NOTE

EBS History & Background

➢ In the standard process of procuring construction contracts, the government spends millions of dollars each year on printing and distributing contract solicitation documents. Although prospective bidders pay a nominal fee for the solicitation sets, the total costs for printing, distributing and warehousing is never recovered. In addition contractors must convert the printed documents into electronic files for use in estimating and quantity take-off software programs.

➢ The standard process involves the placing of an announcement in the Commerce Business Daily (CBD), and sending pre-solicitation notices to potential bidders. If interested, potential bidders notify the contracting office of their interest in receiving a copy of the plans, specifications and contract documents. Typically, agencies are required to reproduce 150 to 200 sets of documents in order to meet the requests of prospective bidders and others.

➢ The Electronic Bid Sets projects changes the standard process by which the government solicits contractor bids for construction projects.

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NOTE

EBS History & Background

➢ The use of EBS improves the process from the use of paper documents into one which prospective bidders may view project plans, specifications and contract documents electronically via the Internet and CD-ROM technology.

➢ While many federal agencies have been making use of electronic commerce and electronic data interchange technology in contracting, this project focuses on a unique challenge. The solicitation documents for a typical construction contract include several volumes of contract documents and 150 or more detailed drawings.

➢ The government benefits through a streamlines and efficient procurement process. The Internet provides a wider and more timely dissemination of the information which should result in increased competitiveness, which results in lower costs. Additional benefits are received through reduced costs for printing, delivery and storage of solicitation documents.

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NOTE

EBS History & Background

➢ The Electronic Bid Sets (EBS) project consists of a standard for delivery and distribution of electronic solicitation. A procedure and methodology were developed which include an announcement that points potential bidders to an Internet address where they may view project plans, specifications, and contract documents and if interested, request a CD containing those files. In order to view the solicitation documents, bidders need only have a Windows-based personal computer with a CD-ROM drive and Internet access. Two royalty-free viewers are included on the CD-ROM to enable users to utilize the documents and also can be accessed via the Internet. One viewer enables bidders to view and utilize all text based documents (specifications and contract clauses) and the other viewer is used for graphic documents (drawings). A simple icon based menu was developed to assist the user in manipulating through the documents and software.

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NOTE

EBS History & Background

➢ Several Corps organizations began initiatives to distribute electronic solicitation information to contractors. The first attempts basically dealt with the conversion of text documents (specifications, etc.) to and electronic format.

➢ The Chief of Engineers endorsed these initiatives for their innovative attempts at streamlining and tasked Headquarters staff elements to develop corporate guidelines for consistency and non duplication of effort.

➢ In FY95, the Tri-Service CADD/GIS Technology Center was tasked to study the feasibility of producing and distributing solicitation documents in an electronic format.

➢ In September 1995, a working group consisting of representatives from HQUSACE, the Air Force, Army, Navy and several Corps districts met to discuss development of a procedure and process for producing electronic bid documents.

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NOTE

EBS History & Background

- Pilot projects were chosen and identified to encompass a variety of construction solicitations and Tri-Service participants.

- Some Pilot Projects are listed below;
  - Dormitory Complex, Edwards AFB, CA
  - Projected Cost Estimated @ $10,000,000.00 Awarded June 1
  - USACE Fort Worth District/ USACE Los Angeles District/ Air Force Material Command
  - Project package - 218 drawings - 1,276 pages of specifications
  - Projected Costs for hardcopy reproduction of bid sets
    - $175/set x 200 sets = $35,000.00
    - Savings -$29,000 (83%)

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NOTE

EBS History& Background

Enlisted Barracks Complex, Fort Carson, CO
Projected Cost Estimate @ $30,000,000.00 Bids Opened August 1996
USACE Omaha District
Project package - 550 drawings - 2100+ pages of specifications
Projected Costs for hard copy reproduction of Bid Set
$420/set x150 sets = $75,000.00 Savings - $57,000.00 (76%)

P-889, Bachelor Enlisted Quarters (BEQ), Camp Pendleton, CA
Projected Cost Estimate @ $12-25,000,000.00 Bids Opened August 1996
NAVFAC SouthWest
Project package - 148 drawings - 1100 pages of specifications
Projected Costs for hard copy reproduction of Bid Set
$150/set x200 sets = $30,000.00 Savings - $25,500.00 (85%)

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NOTE

EBS History& Background

Installation of Water Meters, Point Loma Complex, CA
Projected Cost Estimate @ $500,000.00 - $1,000,000.00
Navy Command Control Ocean Surveilance Center (NCCOSC) RDT&E
Project package - 45 drawings - 300 pages of specifications
Projected Costs for hard copy reproduction of Bid Set
$50/set x200 sets = $10,000.00 Savings - $7,000.00 (70%)

Job Order Contract (JOC) Const/Repair Reqmts for MEDCOM
Projected Cost Estimate @ $1,000,000.00 - $5,000,000.00
USACE Fort Worth District
Project package - 0 drawings - 2500 pages of specifications
Projected Costs for hard copy reproduction of Bid Set
$125/set x150 sets = $18,750.00 Savings - $15,250.00 (81%)

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NOTE

EBS History& Background

The total savings for the pilot projects is approximately $175,000.00, which represents approximately 80% of the estimated costs for reproduction and distribution of printed bid documents. The use of the electronic bid set (EBS) saved the printing of 190,700 drawing sheets and 1,615,150 pages of 8.5"x 11" specifications. A stack of paper containing 1,805,850 sheets of paper would be almost 602 feet tall, and would surpass the Washington Monument by nearly 47 feet. When the use of the EBS application is applied to the thousands of projects nationwide, the resulting savings in costs and natural resources is tremendous.

The vision of this project is to migrate toward electronic bid documents incrementally but aggressively. This process results in the streamlining the construction contract procurement process, eliminating unnecessary reproduction of printed media, and allowing significant savings for both the government and the public.

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NOTE

EBS Decision

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NOTE

EBS Decision

- Decision to go to electronic bid sets is customer driven.The cost savings to the customer is the number one reason for turning to this method of distributing plans and specs.
- Electronic Data Interchange (EDI) is the required method of advertisement for procurements up to $100,000. EBS is designed to handle projects over $100,000 where paper reproduction of specifications exceeds the cost of Electronic Bid Sets.
- The Project and Technical Managers must communicate with the customer (Air Force, Army, Navy, etc.)
- If a district decides to utilize EBS, the proper team must be assembled, district resources analyzed, and the ability to produce a QUALITY product must be the first priority.

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NOTE

EBS Decision

- Scanning of documents should be kept to a minimum if possible. The amount of time required to scan documents and convert them to PDF is dependent on the number of documents to be scanned and the equipment used to scan them.
- Scanned documents also occupy more disk space.
- The amount of time involved to produce the CD, scan any related documents, and generate amendments needs to be taken into consideration when setting up schedules.

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NOTE

Legal Issues

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NOTE

Legal Issues

- Current EBS process under protest. Awaiting GAO decision.
- Contractor concerns.
- Government Response.

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NOTE

Advertisement

NOTE

Advertisement

- The Commerce Business Daily (CBD) is mandated by the Federal Acquisition Regulation (FAR). All contract actions over $100,000 must be advertised in this publication. The CBD is available for viewing over the Internet for free. It also provides links to the responsible procuring activity for further project information. The CBD is available at: http://cbdnet.access.gpo.gov
- The Internet is the advertising vehicle of the future. The current use of the Internet is limited based on the ability of the contracting community to access the files. This includes contracting personnel and contractors.
- All activities mail pre-solicitation notices to prospective bidders who are small businesses. Even with expanded use of the Internet, this is still a mandatory requirement.

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NOTE

Web Demo

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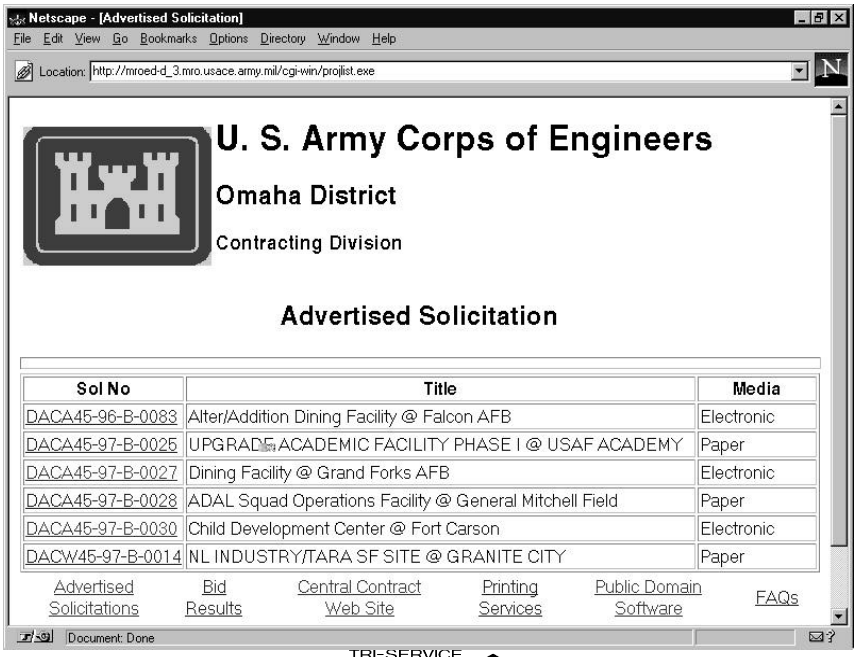
NOTE

Web Demo

List of Advertised Solicitations



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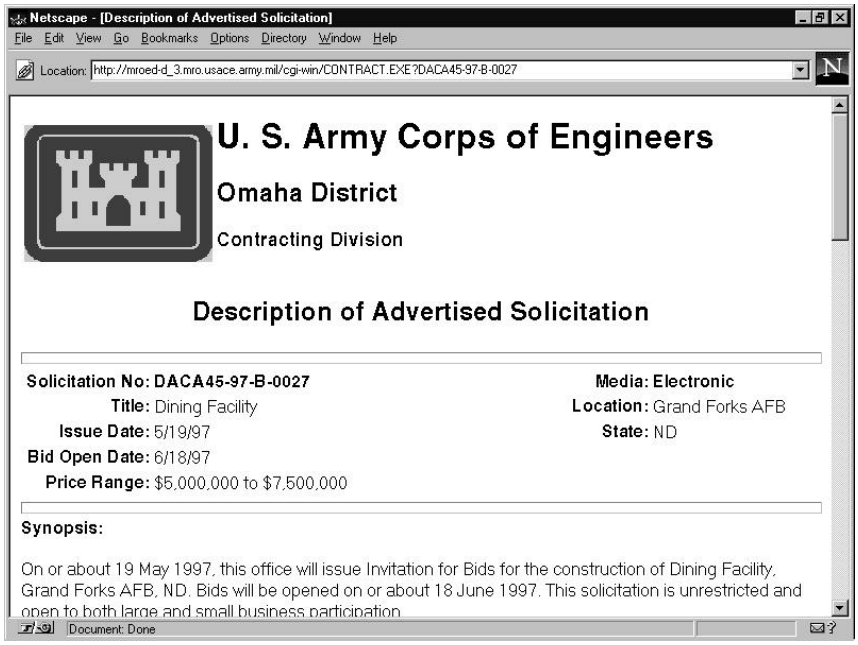
NOTE

Web Demo

Advertised Solicitation



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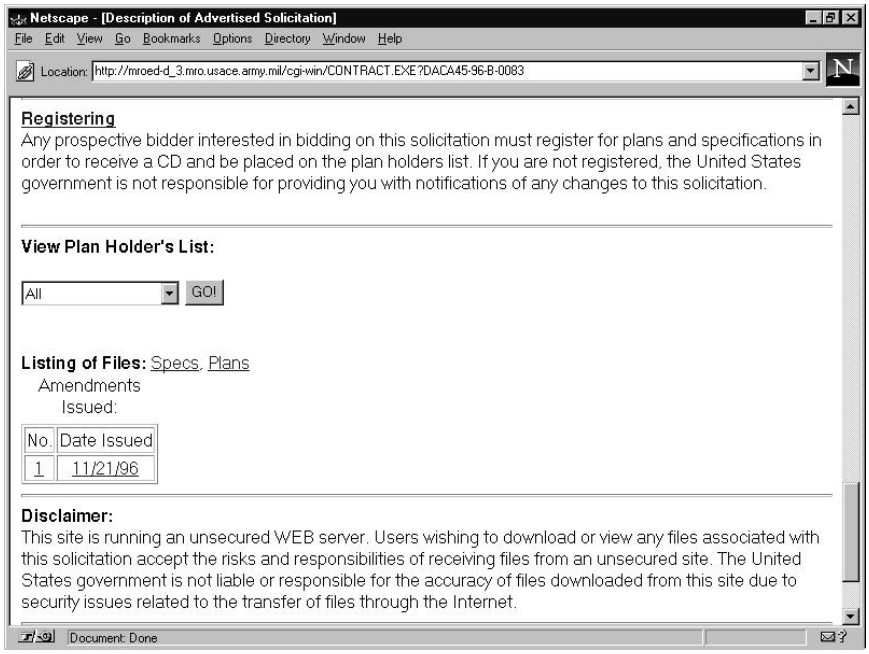
NOTE

Web Demo

Advertised Solicitations (Continued)



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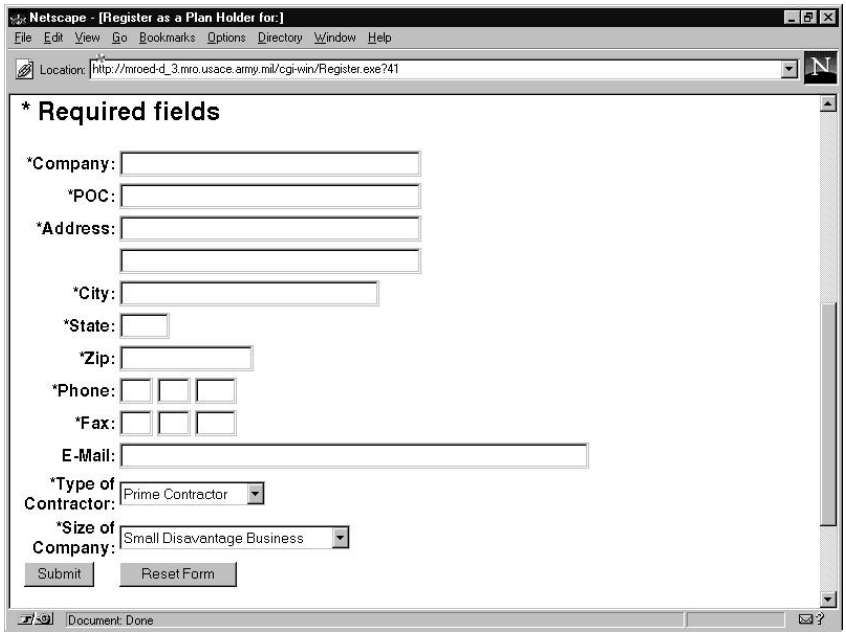
NOTE

Web Demo

Plan Holder Registration



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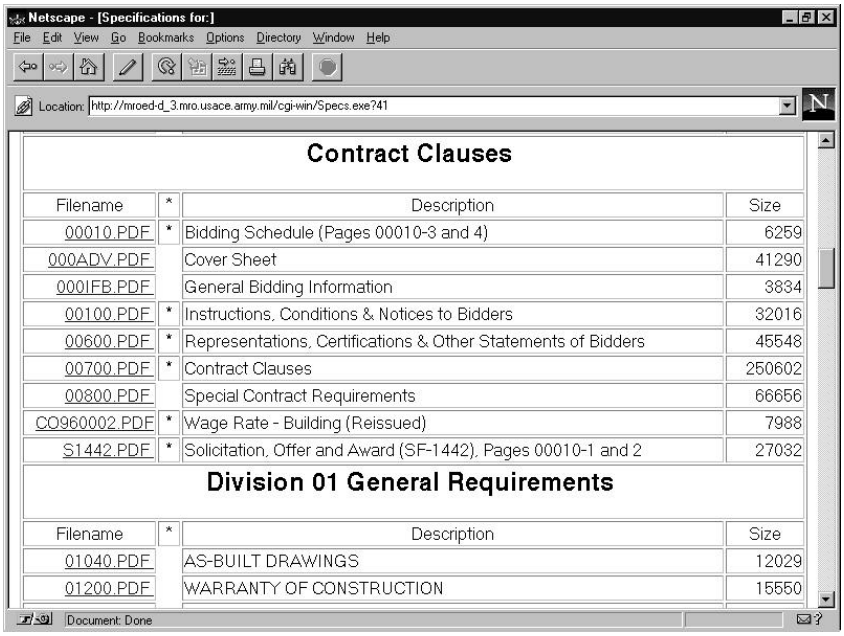
NOTE

Web Demo

List of Plan and Specification



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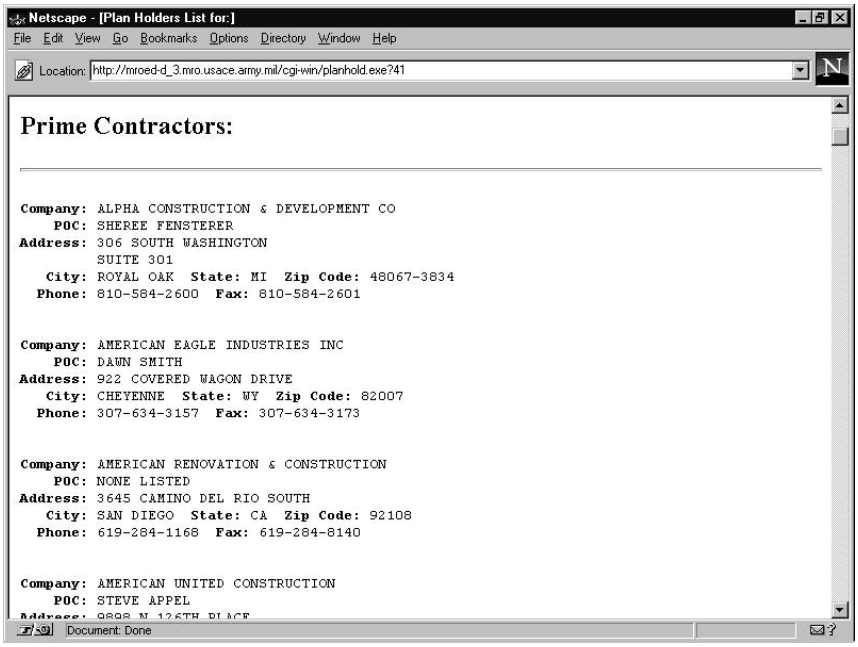
NOTE

Web Demo

Plan Holder List



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NOTE

EBS Demo

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NOTE

EBS Demo

- The opening message box.

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NOTE

EBS Demo

- The Contract Viewer program.

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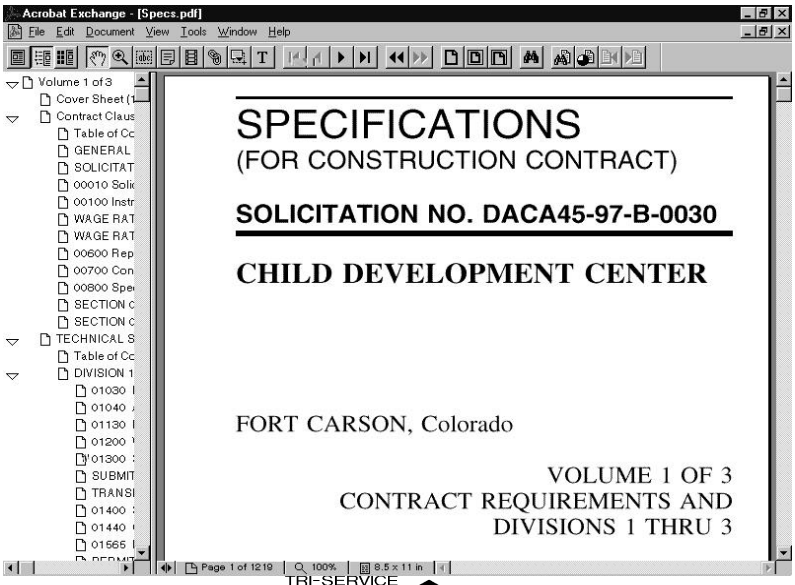
NOTE

EBS Demo

- Clicking on the Specifications Button produces:



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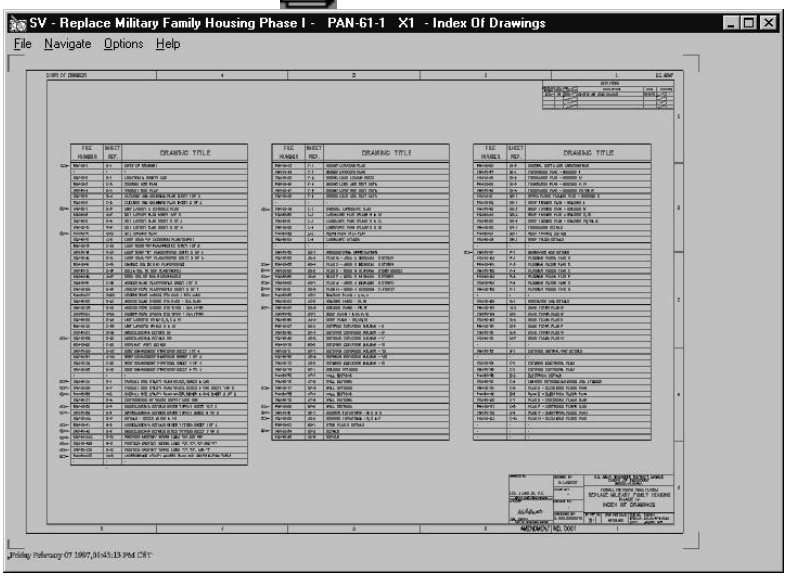
NOTE

EBS Demo

- Clicking on the Drawing Button  produces:



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NOTE

Hardware and Software Requirements

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NOTE

Hardware and Software Requirements

- HARDWARE REQUIREMENTS:

  The minimum hardware requirements necessary to run the applications are:

  - PLOT SERVER
    - Pentium Pro (Plot Server)
    - 32MB Ram
    - 1 Gig Hard Drive
    - Network Board
  - WORKSTATION
    - 486/66 Personal computer (Workstation)
    - 16 or 32MB RAM
    - CD-ROM Maker (Need one)
    - 1 Gig Hard Drive Recommended
    - Network Board

NOTE: The CD-ROM maker software should be compatible with Windows NT and configured.

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NOTE

Hardware and Software Requirements

- SOFTWARE REQUIRMENTS:

  The minimum software requirements necessary to run the applications are:

- PLOT SERVER
  - Windows NT 3.51 Server (Plot Server)
  - Iplot Server ver 8.0/Aplot Professional ver 1.0 (Plot Server)
  - Intergraph Raster Off-line Driver (Plot Server)

  NOTE: Iplot is used with MicroStation and Aplot is used with Acad.

- WORKSTATION
  - Windows NT 3.51 (Workstation)
  - MicroStation ver 5 or 95 /Acadr13_c4 (Workstation)
  - Iplot Client ver 8.0/Aplot Professional ver 1.0 (Workstation)
  - SourceView ver.2.29(Workstation)
  - Adobe Acrobat Exchange
  - Windows 3.1, 95
  - SVCAP.DRV (For Windows 3.1)

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NOTE

Hardware & Software Requirements

- **Software Costs**
  - Source View $795.00
  - Adobe Acrobat Professional $1,500 (Check with your IM)
  - Interplot off-line driver $398.00 (NAV AIR Contract)
  - Aplot Professional $198.00 (NAV SEA Contract)
  - Iplot Server $1020.00 (NAV FAC Contract)
  - Iplot Client $80.00 (NAV AIR Contract)
  - Windows NT $1000.00 (20 user License) ($30.00 ea per user seat)

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NOTE

Directory Structure

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NOTE

Directory Structure

The file and directory structure should look like this:

```
97B0026
01/17/97  08:55a       <DIR>          ACROREAD
01/18/97  08:20a       <DIR>          PLANS
01/18/97  08:20a       <DIR>          PDF
01/17/97  08:59a       <DIR>          SVREAD
10/28/96  09:12p                   51 AUTORUN.INF
08/13/96  06:42a              291,584 CONTRACT.EXE
08/13/96  06:42a               78,621 CONTRACT.HLP
01/18/97  08:11a                  478  index.con
01/18/97  08:18a                4,797  README.TXT
01/18/97  05:50a            1,755,170  97B0026.PDF
```

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NOTE

Directory Structure

- There are two pieces of software that is needed to create the CD ROM Advertisement. " ***SourceView***" for your cals files and "***Adobe Acrobat for workgroups***" for your clauses and specifications. Before your make your CD you must have an ***acroread directory*** which acrobat reader software is located, you must have a ***Plans directory*** where you put all your cals files, and you must have a ***svread directory*** which sourceview reader software is located. You must have an autorun.inf, contract.exe, contract.hlp, index.con and a readme.txt. The autorun.inf file is used if you are using Windows 95 or Windows NT 4.0. This file will automatically bring up the contract viewer. The contract.exe file is use to bring up your contract viewer. The contract.hlp file is a window based help file, which tells how to bring the contract viewer. The Index.con file is used to tell the contract.exe file where the files are located on the CD.

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NOTE

Creating CALS files

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NOTE

Creating CALS files

- CALS Files or .CAL Files
  - What Is a CALS file ?
  - Continuous Acquisition and Life-Cycle Support (CALS)
  - Type 1 CALS Group 4 Compressed Raster Files

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NOTE

Creating CALS files

- Viewing CALS Files
  - OnCenter - Oncenter
  - SourceView - From Dataware Electronics
  - IRASB - Intergraph
  - Slick Ver 4.0
  - Other Raster Viewers
  - MicroStation Raster Reference File.

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NOTE

Creating CALS files

- Methods of Creating .CAL Files
  - Windows print driver from SourceView (SVCAPT.DRV)
  - Intergraph's InterPlot Raster Offline Driver Pack. Used with Iplot and Aplot.
  - Other .CAL Raster Drivers.
  - Scan (Hardcopies)

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NOTE

Creating CALS files

- SourceView's SVCAPT.DRV
  - Load the SourceView windows print driver to your Windows 3.1 PC,
  - Set the svcapt.drv as your default printer.
  - From MicroStation 95 use the print command.
  - From AutoCAD 13_c4 use print or print to a postscript file then use Ghostscript to create CALS files.
  - Ghostscript is public domain software. It can be obtained from Dataware Electronics with SourceView or downloaded from the Tri-Service EBS page.
  - From AutoCAD 12(latest version) for windows 3.1 or 95 use windows print with svcapt.drv.
  - This method is slow, 2-5 min per drawing unless you have a PC with more than 32 MB RAM.

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NOTE

Creating CALS files

- InterPlot Raster Offline Driver Pack
  - For MicroStation use Iplotserv for Win NT and Iplot Client
  - For AutoCAD use Aplot Professional on the server and Aplot Professional on the client.

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NOTE

Creating CALS files

- Using the Raster Offline Driver Pack with MicroStation
  - Windows NT 3.51 Workstation or Server can be used as the plot server.
  - Iplotserv 7.X or 8.X and the Raster Offline Driver Pack must be loaded on the plot server. Set up a cal queue on the NT Print Server.
  - Iplot Client 7.X or 8.X must be loaded on the client (Win NT, 95, 3.1, or CLIX UNIX)
  - Iplot 8.x for Win NT or 95 has the Iplot organizer to batch plot drawings, Iplot 7.x does not.

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NOTE

Creating CALS files

- Using the Raster Offline Driver Pack with AutoCAD
  - Windows NT Workstation or Server can be the plot server.
  - Aplot Professional must be loaded on the plot server.
  - AutoCAD 13_c4 must must be loaded on the client.
  - Aplot Professional or Aplot Lite must be loaded on the client
  - Aplot Professional has the Aplot organizer to batch plot drawings.
  - Aplot Lite can be used on Dos/Windows 3.1 clients with AutoCAD 12 but it does not have the organizer (no batch plotting).

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NOTE

Creating CALS files

- Scanning Hard copy Drawings
  - Use Large Scanner
  - Scan Drawings in at 300DPI
  - After Scanning you will have to adjust the scan file to fit square with the screen using raster editor like IRASB.

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NOTE

Creating CALS files

- Other Hardware/Software
  - The Intergraph CLIX UNIX workstations can be used to create .cal files.
  - MicroStation 5 or 95 and Iplot Client sending plots to an NT plot server that has Iplot Server and the Offline Driver Pack.
  - To view the .cal files you would have to go to a PC that has Windows 3.1, 95, or NT

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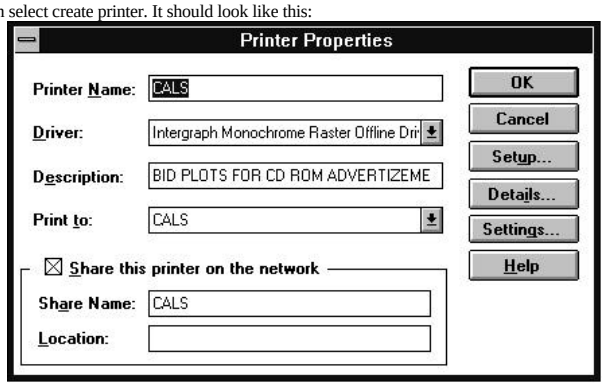
NOTE

Creating CALS files

Plot Server Configuration

The first step is to load Windows NT Server on the plot server. The second step is to load the Iplot server or the Aplot Professional dependent on which Cadd system that you are using . ***NOTE*: *Only AcadR13_c4 will work with the Aplot Professional.*** The third step is to load the Intergraph Raster Off-line Driver. The fourth step is to reboot the Plot Server after you done steps 1-3. The fifth step is to set up a print queue in print manager.

Step 1. Open print manager which is in the program group called main. Once in print manager select printer and then select create printer. It should look like this:



The Printer Name is called "CALS" to describe what it prints.

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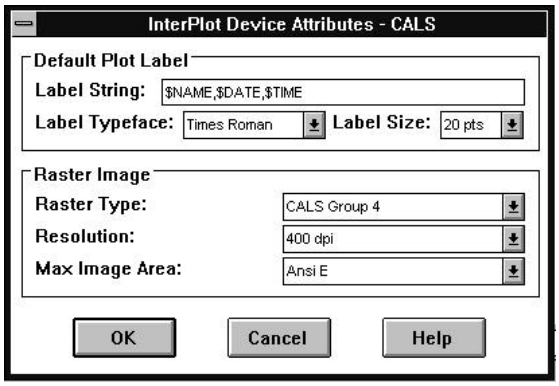
NOTE

Creating CALS files

Next, select the raster printer driver: “CALS Group 4 using the down arrow. Share the printer on the network so that workstations can connect to the printer. Then select setup from the printer properties. It should look like this:



The Plot Label can be used to put a plot wrapper on your plots. The environment variables (those starting with $) are set in a setting files we will discuss later. The label Typeface and Label size is the font type and text size used in the Plot label. The Raster Type is CALS Group 4. We suggest a Resolution of 300 dots per inch. Setting Max Image Area to ANSI E sets the sheet plotting area. After the configuration is completed select OK. Under Printer properties select settings. It should look like this:

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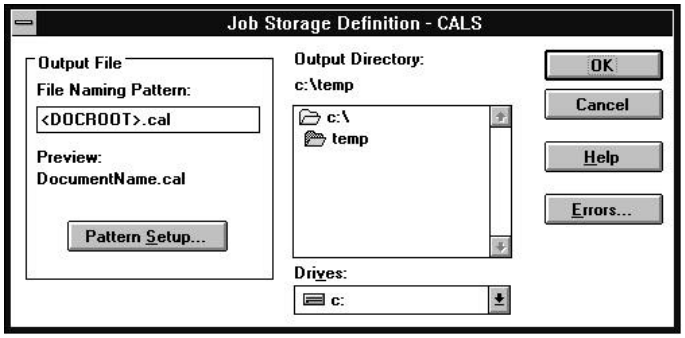
NOTE

Creating CALS files



You must set up a directory on the plot server where you want to put your Plot files. Once this is established select the drive and output directory for your Plot files.

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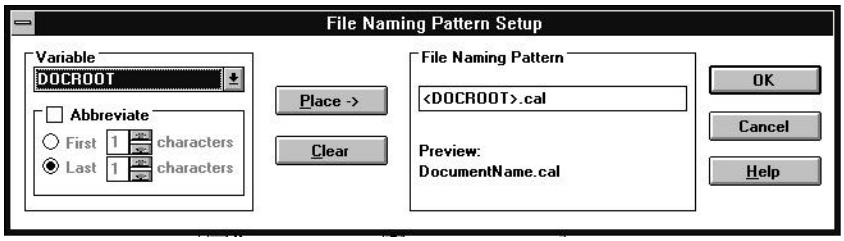
NOTE

Creating CALS files

Next select Pattern Setup. It should look like this:



Under the variable select the down arrow and select "docroot" which is the root name of the file that you are plotting. Select place, this will put the docroot over where it says file naming pattern. You must have an extension on the file name so put .cal after <DOCROOT>. Once this is configured select OK. Select OK in the Job Storage Definition and OK at the Printer Properties. Now your Plot queue is set up and you are ready to send plots to your plot server.

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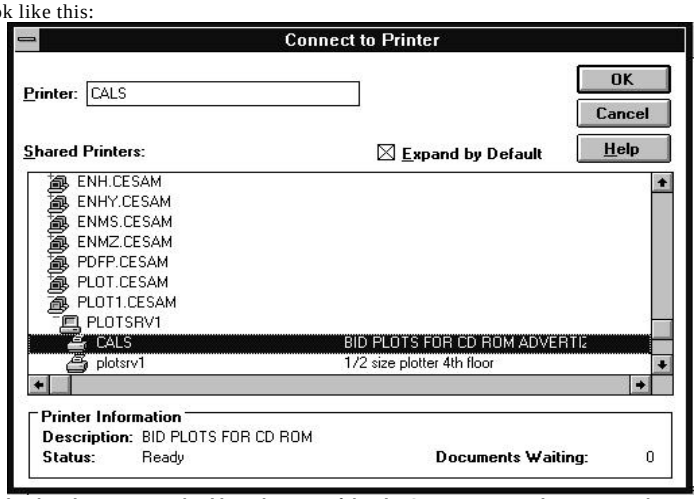
NOTE

Creating CALS files

The first step is to load Windows NT Workstation. The second step is to load Iplot Client or Aplot Professional. ***NOTE: Only AcadR13_c4 will work with the Aplot Professional*** . The third step is to load the Source View software. The fourth step is to reboot the Workstation. The fifth step is to set up a print queue in print manager. Open print manager which is in the program group called main. Once in print manager select printer and then select create printer. It should look like this:



Under shared Printers you should see the name of the Plot Server. ***Example***: Plot1.cesam is the name of the plot server. Plotsrv1 is the name of the computer and cals is the name of the shared printer. Once you selected your shared printer select OK. Now your workstation is set up for the plotter.

NOTE

Creating CALS files

Iplot is used with Microstation and there a couple of files that are needed to plot to the plot server. After the installation of Iplot you need to set up a set file and a pen table. The Iplot settings file is in the Iplot settings directory. The settings file must have the same name as your print queue. Example: I have a printer queue called cals so my set file is called cals.set. and should look this:

```
-paper_size="ANSI E"
-environment=[name="Hiles ext 2639"]
-pen_table=d:\pen\penF.pen
-color_table=d:\win32app\ingr\iplot\misc\bw.ctb
-area=shape
-area_level=63
-area_color=3
-rotation=90
-xsize=32
```

The paper_size is the sheet size of the paper. The environment variable is used in the Plot Label so I use my last name and my phone extension. The pen_table is the pen thickness' that is generated when I plot my Cadd file. The area=shape,area_level and area_color is used when you want to batch plot to scale using Iplot Organizer in which we will talk about it later.

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NOTE

Creating CALS files

Your pen file must have .pen extension and be in a directory that you created on your workstation. Your pen file should look something like this:

```
! pen.f for full E size plots
! set to black & white
if (color .ne. 0) then
color=0
endif

! set line thicknesses
if (weight .eq. 0) then
  thickness=.008
 else if (weight .eq. 1) then
  thickness=.011
 else if (weight .eq. 2) then
  thickness=.015
 else if (weight .eq. 3) then
  thickness=.020
 else if (weight .eq. 4) then
  thickness=.025
 else if (weight .eq. 5) then
  thickness=.035
 else if (weight .eq. 6) then
  thickness=.045
 else
  thickness=.055
endif
```

You are now ready to plot Cadd files from your workstation using Iplot.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating CALS files

Aplot is used with only Acadr13_c4, and there a couple of files that are needed to plot to the plot server. After the installation of Aplot you need to set up a set file and a pen table. The set file is located in the Aplot settings directory and should look this:

```
-paper_size="ANSI E"
-environment=[name="Hiles  ext 2639"]
-pen_table=d:\pen\ahalf.pen
-dwg_area=extents
-color_table=d:\win32app\ingr\aplot\misc\bwtable.col
-rotation=90
-xsize=32
```

The paper_size is the sheet size of the paper. The environment variable is user for your Plot Label that is plotted on your plot which is my last name and my phone extension. The pen_table is the pen thickness' that generated when I plot my Cadd file. The dwg_area=extents is used when you want to batch plot to scale using Aplot Organizer in which we will talk about it later. The settings file must have the same name as your print queue. Example: I have a printer queue called cals so my set file is called cals.set.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating CALS files

Your pen file should look something like this:

```
units = mm
if (width < .630)
then

switch (color)
        case 1 ?
        plot_width = .200
        case 2 ?
        plot_width = .500
        case 3 ?
        plot_width = .300
        case 4 ?
        plot_width = .500
        case 5 ?
        plot_width = .400
        case 6 ?
        plot_width = .500
        case 7 ?
        plot_width = .630
        case 8 ?
        default ?
        plot_width = .200
endswitch
endif
```

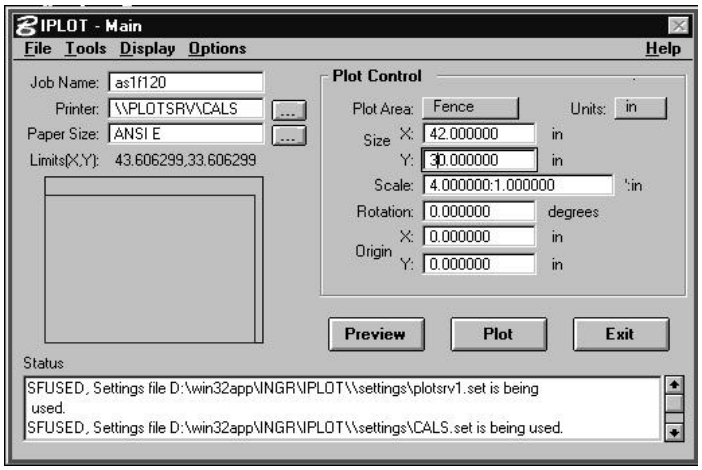
Your pen file must have .pen extension and put in a directory that you created on your workstation. You are now ready to plot Cadd files from your workstation using Aplot.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating CALS files

There are two ways you can submit plots. The first way is individual, in which you will bring up your Cadd file and start Aplot or Iplot in whichever Cadd System that you are using. Your Iplot dialog box should look like this.

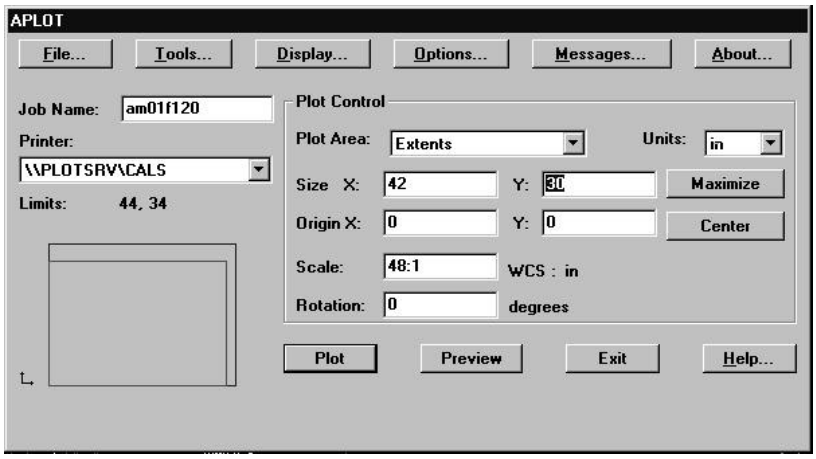


TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating CALS files

Your Aplot Dialog box should look like this:

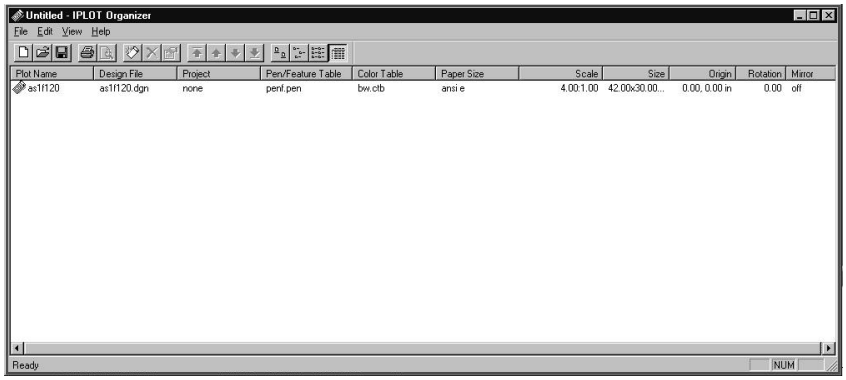


TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating CALS files

The second way to plot is to use your Iplot or Aplot Organizer. Your Iplot Organizer should look like this:

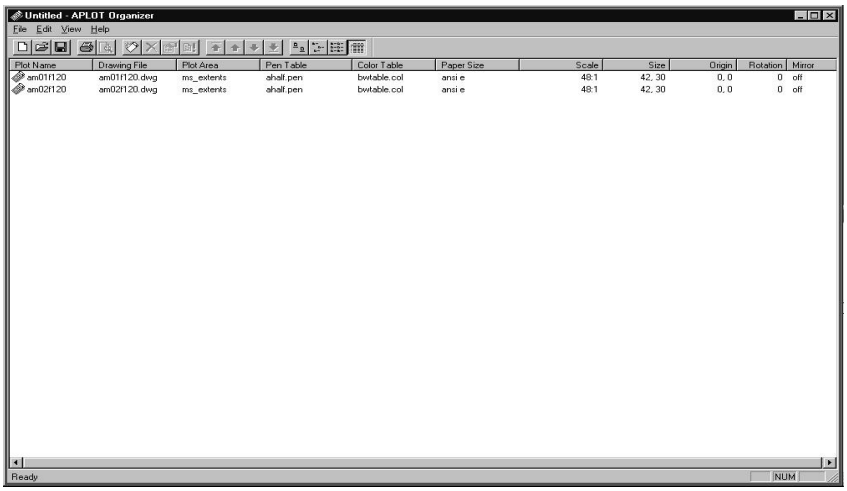


TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating CALS files

Your Aplot Organizer should look like this:



It is necessary to have your setting files set up correctly so your plot files will plot to scale using Iplot or Aplot Organizer. Notice above at the scale in your Iplot or Aplot organizer. This is the correct scale for the plot files.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating CALS files

- Creating the SourceView Index File
  - Store all the .cal files in a solicitation plans directory on your server, then use SourceView Author to Index the files/drawings.
  - After the files have been indexed, the .svd file is saved as sendable, or compiled into an encrypted .svd file that can be put on the CD or sent to anyone and viewed using the svreader.exe file.
  - The svreader, svreader.exe is sent with the .cal files and the .svd index file.
  - The fastest and easiest way to create the .svd index file is to use a text editor to create the file in the attached format shown before saving the file as sendable.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating CALS files

- Creating the SourceView Index File
  - Use of a ASCII file editor such as notepad etc. This is very useful in creating the .svd index file.
  - Align the column of .cal files first then sheet or sequence numbers and then the drawing description. When the file is in the correct format copy the index.txt to index.svd, export the .svd file.
  - SVDOC;VER2.29 Replace Military Family Housing Phase IV, Tyndall AFB, Florida
  - XCF208.CAL - Cover
  - X01F208.CAL PAN-61-1 X1 - Index of Drawings
  - C01F208.CAL PAN-61-2 C1 - Location and Vicinity Map
  - C02F208.CAL PAN-61-3 C2 - Existing Site Plan
  - C03F208.CAL PAN-61-4 C3 - Overall Site Plan
  - ;endofblock
  - Have The A/E designers submit a spread sheet file in the following format
  - Have your in-house designers submit there list of drawings in a ASCII text file.
  - After creating the index.svd for the CD using SourceView Author save the index in the path of each.cal file.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating CALS files

- QC the Index with svreader
  - After the .cal files have been created and Indexed, check the following:
  - The Scale of the .cal files. Measure the width or depth of the .cal drawing file.
  - Does the correct drawing come up from each line in the .svd index file?
  - Click on each drawing.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

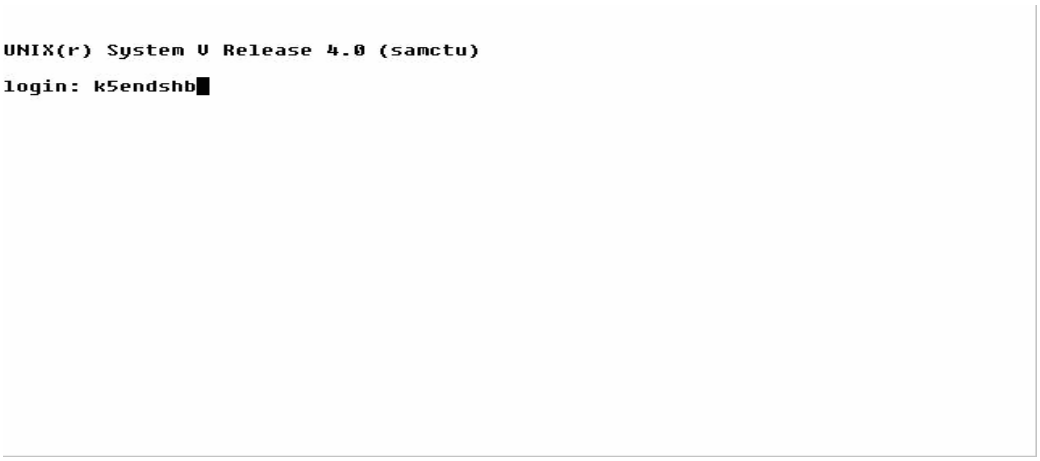
NOTE

SAACONS EBB MENU

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

SAACONS EBB MENU

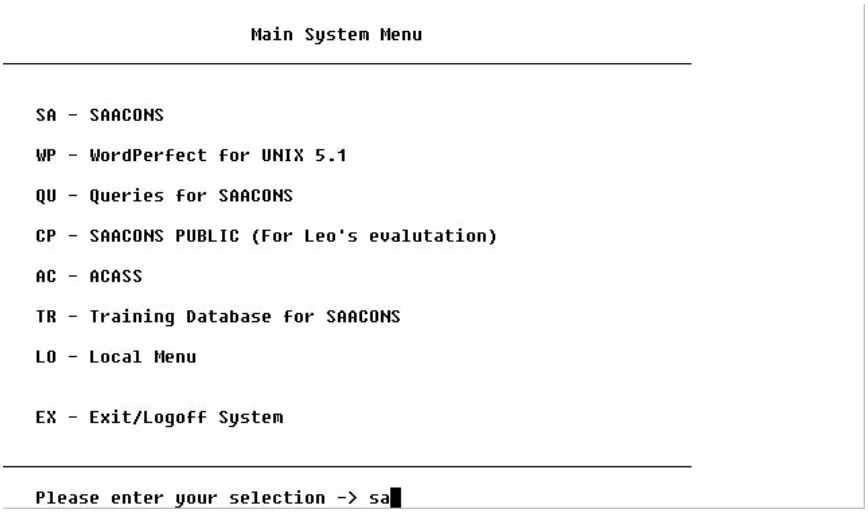


Step 1- Login into SAACONS

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

SAACONS EBB MENU

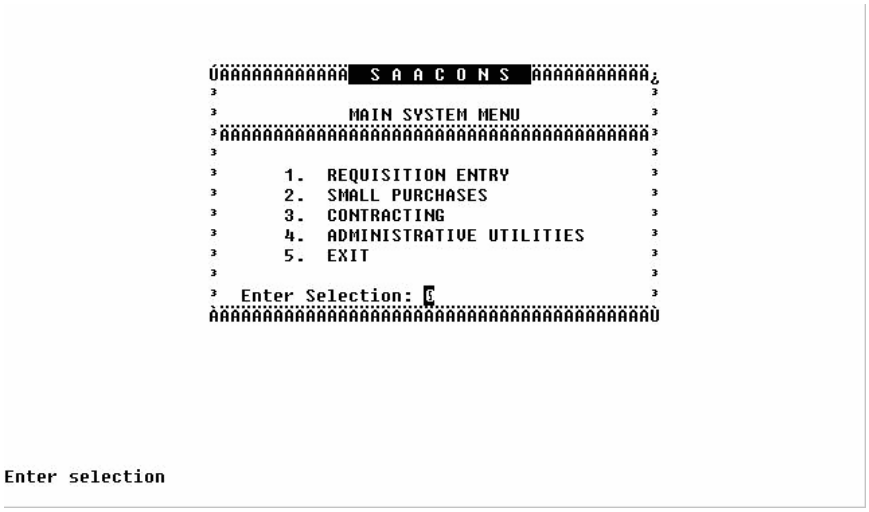


Step 2 - Select SA to go into the Main System Menu

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

SAACONS EBB MENU

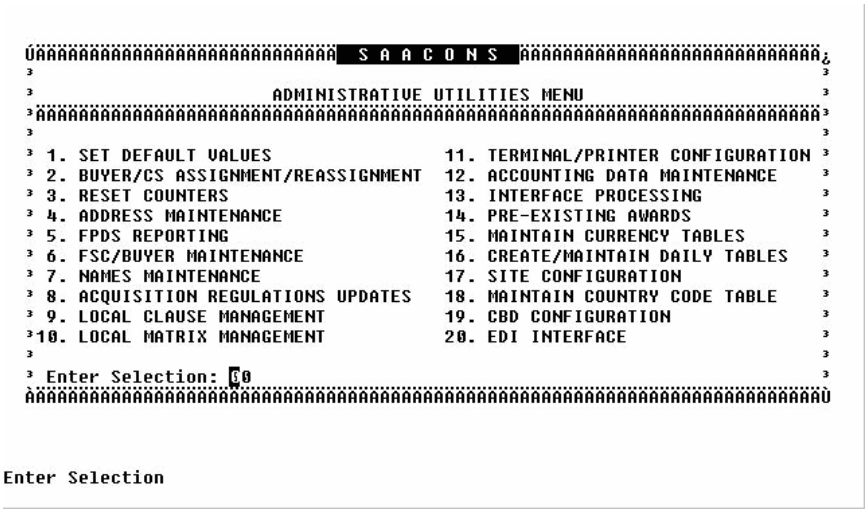


Step 3 - From the SAACONS Main System Menu Select #4-Administrative Utilites

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

SAACONS EBB MENU

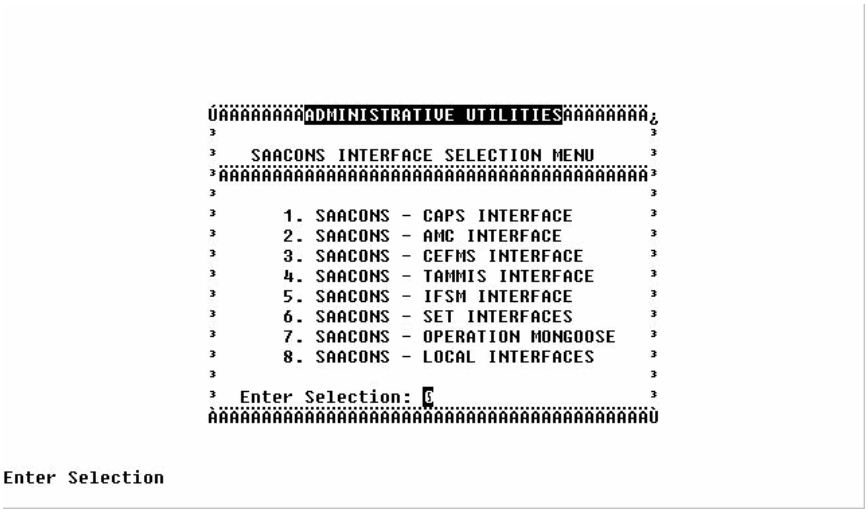


Step 4 - From the Administrative Utilities Menu Select #13 Interface Processing

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

SAACONS EBB MENU

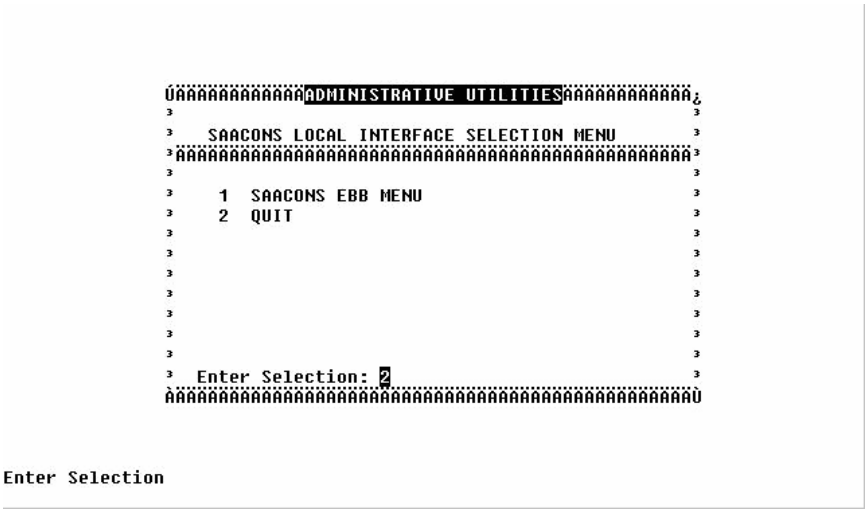


Step 5 - From the Interface Selection Menu Select #8 Local Interfaces

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

SAACONS EBB MENU

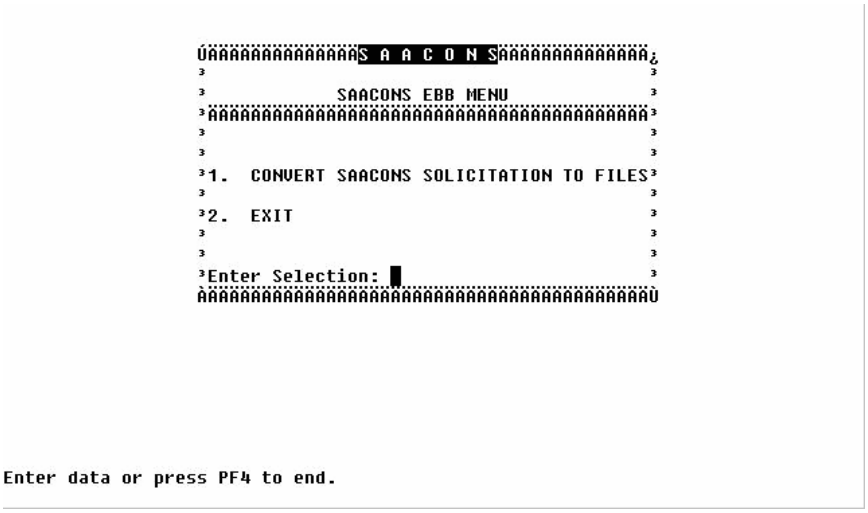


Step 6 - From the Local Interface Selection Menu Select #1 SAACONS EBB MENU

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

SAACONS EBB MENU

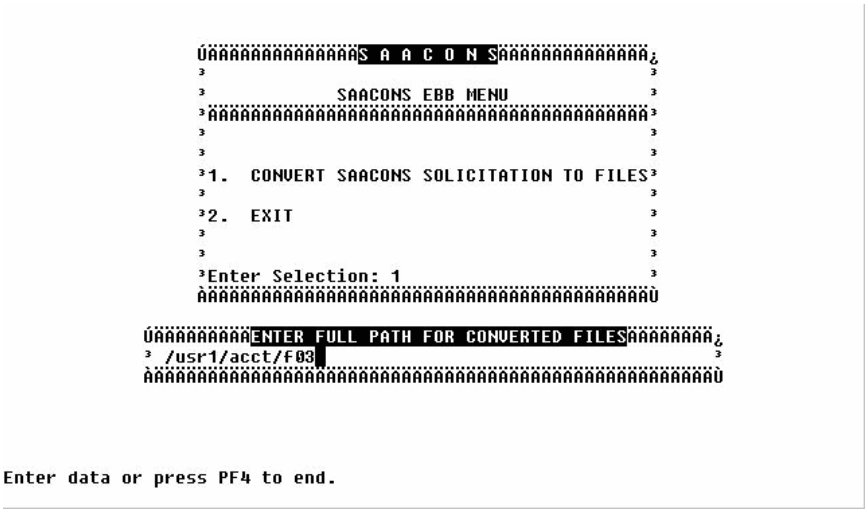


Step 7 - From the SAACONS EBB MENU Select #1 Convert SAACONS Solicitation Files

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

SAACONS EBB MENU

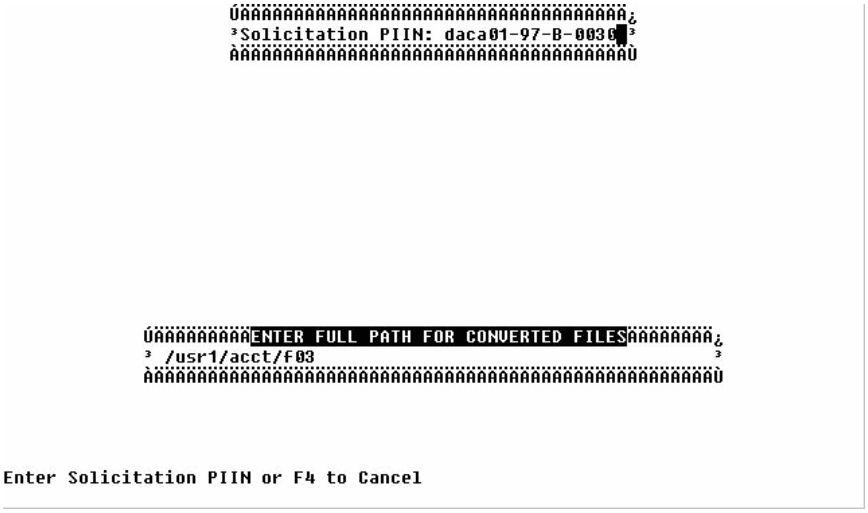


Step 8 - Enter full path for converted files press ENTER

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

SAACONS EBB MENU

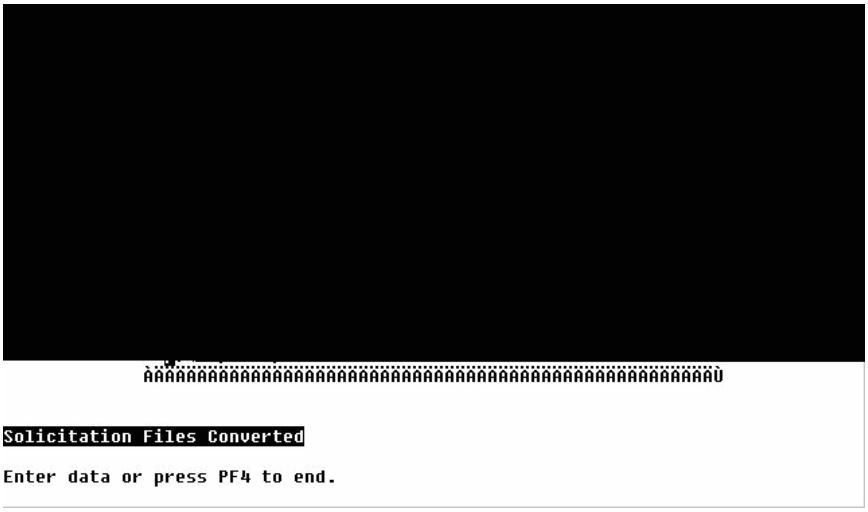


Step 9 - Enter in the Solicitation PIIN number for the project your working on press ENTER

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

SAACONS EBB MENU



Step 10 - Your Solication Files have been converted press f4 to end
Step 11 - FTP your converted files from SAACONS to your hard drive and bring them up in a word processor. Clean up the file, run the macro and convert them to PDF.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Exchange

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Exchange

- How to create PDF files
  - Windows 3.x, 95, & NT
    - Print to the Adobe Acorbat PDFWriter
  - Hard Copy
    - Scanned directly to PDF
    - Import graphic images with Acrobat Exchange
  - MS DOS
    - Print to a post script driver and convert to PDF with Adobe Distiller

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Exchange

Lesson 1: Using Acorbat Exchange's Link function to open a file

Open the file C:\EBS\EXCHANGE\INDEX.PDF

View | Fit Visible - This makes it easier to view the document

Move down to Specification 02070

Select the link tool: Tools | Link or Ctrl + Shift + 7

To draw a box around **02070 Demolition** move the mouse to the lower left hand corner of the text to be linked. Click and hold the right mouse button down and move the mouse to the upper right hand corner of the text.

This will bring up the "Create Link" window.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Exchange

Lesson 1: Using Acorbat Exchange's Link function to open a file (Continued)

Setting the Create Link window parameters:

Appearance:

Type: Invisible

Highlight: None

Action:

Type: Open File

File: None

Select File

Click on "Select File" and select the 02070.PDF file

Click on "Set Link" to enable the link

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Exchange

Lesson 2: Using Acorbat Exchange's Link function to move to certian page

With the file C:\EBS\EXCHANGE\INDEX.PDF open

Block the text "Table of Contents" on page 1.

With the "Create Link" window open, move to page 2.

Set the following parameters in the "Create Link" window.

Appearance:

Type: Invisible

Highlight: None

Action:

Type: Go to View

Magification: Inherit Zoom

Click "Set Link"

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Exchange

Lesson 3: **Adding pages to end of a PDF file.**

Open the file C:\EBS\EXCHANGE\LIGHTING.PDF
Document | Insert Pages... or Ctrl + Shift + I
Select the file C:\EBS\EXCHANGE\TYPE109.PDF

Set the following parameters in the “Insert” window.

Location: After

Page: Last

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Exchange

Lesson 4: Adding pages to middle of a PDF file.

In Exchange, move to the first page of LIGHTING.PDF
Document | Insert Pages... or Ctrl + Shift + I
Select the file C:\EBS\EXCHANGE\TYPE103.PDF

Set the following parameters in the “Insert” window.

Location: After

Page: Page 1

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Exchange

Lesson 5: **Removing a page from a PDF file.**

In Exchange, move to the third page of LIGHTING.PDF

Document | Delete Pages... or Ctrl + Shift + D

Set the parameters to the third page

From: 3 To: 3

Click “Ok”

Are you sure you want to delete page 3?

Click “Ok”

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Exchange

Lesson 6: Adding book marks.

In Exchange, move to the first page of LIGHTING.PDF
Document | New Bookmark or Ctrl + B
Type: Type 101 & 102

Move to page two
Document | New Bookmark or Ctrl + B
Type: Type 103, 104, & 105

Move to page three
Document | New Bookmark or Ctrl + B
Type: Type 109

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Exchange

Lesson 6: **Importing graphic files into a PDF file.**

In Exchange, select File | Import | Image

Select C:\EBS\EXCHANGE\15001.TIF

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Distiller

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Distiller

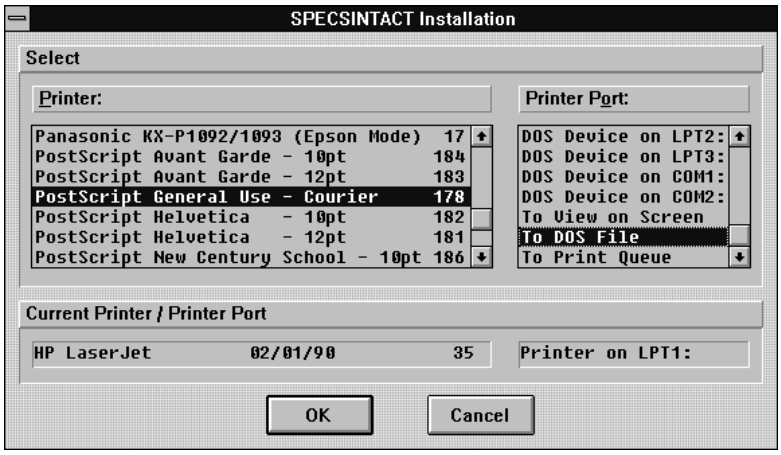
- Things to that will be discussed:
  - How to install a Post Script driver for:
    - SpecsIntact (Non-SGML)
    - Word Perfect 5.1
    - Windows applications
  - How to convert one file at a time to PDF
  - How to have Distiller watch a directory and convert files as they are created

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Distiller

- How to install a Post Script print driver into SpecsIntact (Non-SGML)
  - Under the group “SPECSINTACT for Windows”, select “Setup”
  - From the menu select “Editor Setup | Assign / Change Printer…”
  - Select a PostScript driver and “To DOS file” as the Printer Port



TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Distiller

- How to install a PostScript print driver into Word Perfect 5.1
  - Download the file WPPS1.ALL from http://ebs.mro.usace.army.mil/ebs.htm. This file contains PostScript print drivers for Word Perfect 5.1.
  - In Word Perfect press [Shift F7] [S] [A] [O] and type in the path to the above file.
  - Select a PostScript print driver (i.e. “HP LaserJet Series II PostScript”)
- Each time you print a file you will need to change the output file name:
  - [Shift F7] [S] to select the PostScript printer
  - Select the PostScript printer
  - [E] [P] to edit the output file location
  - Type in the path and file name of the PostScript file to be created
  - [Enter] [Enter] [1] will print the full document

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Distiller

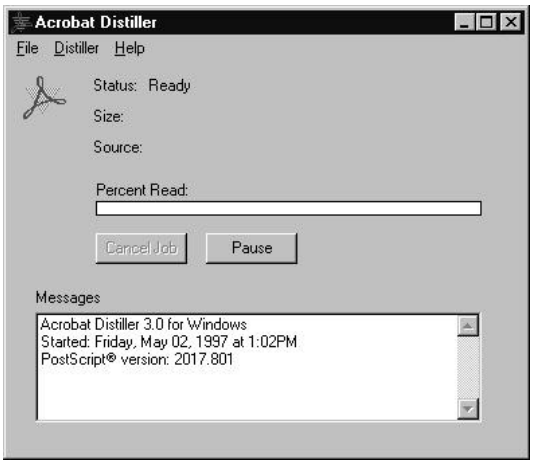
- How to install a PostScript print driver into Windows 3.1:
  - From the group “Main”, select “Control Panel”
  - Select Printers
  - Click the “Add>>“ button to show a list of printers
  - Select a print driver that is PostScript (i.e. “HP LaserJet IIP PostScript”)
  - Once the driver is installed you needed to select “Connect”
  - From the “Ports” list box select “FILE:”
  - Click “Ok”
  - Click “Close”

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Distiller

- How to convert one file at a time to PDF
  - File | Open
  - Select a PostScript file to convert to PDF
  - Choose the path and file name of the PDF file

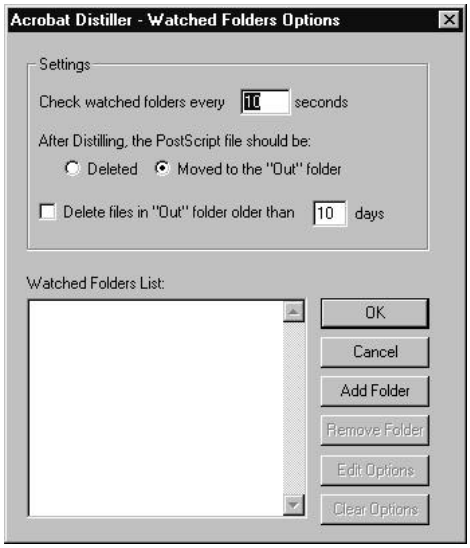


TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Adobe Acrobat Distiller

- How to have Distiller watch a directory and convert files as they are created
  - Distiller | Watched Folders
  - Click on “Add Folder”
  - Select the directory to be watched
  - Distiller will create two sub-directories - IN/OUT
  - Any PostScript files placed in the IN directory will be converted PDF
  - Both files will be moved to the OUT directory



TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Combining PDF Files

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

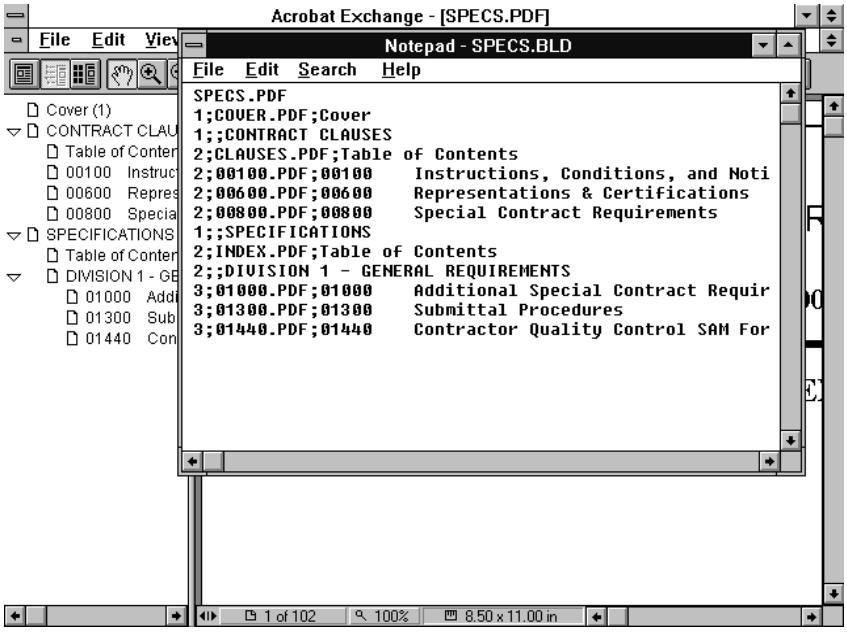
Combining PDF files

- Two methods of combining PDF files
  - Adobe Acrobat Exchange
    - Manually insert pages and bookmarks
    - Tedious and prone to user error
    - Cumbersome to make additions and deletions
  - AcroBuild
    - Is done automatically
    - Uses a BLD file to lets users define how files are combined
    - Easy to update, just rebuild

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Combining PDF files



TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Combining PDF files

<u>Step 1:</u> Creating PDF files with Microsoft Word:

Under the group “Microsoft Office”, select “Word”

Select File | Open

Switch to the C:\EBS\WORKSHOP directory

Open a specification

File | Print | Name

Select “Acrobat PDFWriter for NT”

Click on “Ok”

Save PDF File As:Type in the section number of the file being printed

Acrobat PDFWriter Document Information: Click on “Ok”

File | Close

Repeat until all files have been printed to PDF then exit Word

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Combining PDF files

Step 2: **Move PDF files to C:\EBS\WORKSHOP\PDF directory**

Under the group “Main”, select “File Manager”

View the files in the C:\EBS\WORKSHOP directory

Select all the PDF files

Drag and Drop them into the C:\EBS\WORKSHOP\PDF directory

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Combining PDF files

Step 3: **Creating the Build file**

Under the group “Accessories”, select “NotePad”

Open the file C:\EBS\WORKSHOP\PDF\SPECS.BLD

Note: This file is the INDEX.DOC saved in ASCII format.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Combining PDF files

Step 3: **Creating the Build file (Continued)**

Delete un-needed lines of text.

CONTRACT CLAUSES

00100 Instructions, Conditions, and Notices to Bidders

00600 Representations & Certifications

00800 Special Contract Requirements

DIVISION 1 - GENERAL REQUIREMENTS

01000 Additional Special Contract Requirements

01300 Submittal Procedures

01440 Contractor Quality Control SAM Form 696

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Combining PDF files

<u>Step 3:</u> Creating the Build file (Continued)

Insert the followin lines into the SPECS.BLD file:

==> SPECS.PDF <== File to be created

==> 1;COVER.PDF;Cover <== Cover sheet

CONTRACT CLAUSES

==> 2;CLAUSES.PDF;Table of Contents <== Index of Contract Clauses

00100 Instructions, Conditions, and Notices to Bidders

00600 Representations & Certifications

00800 Special Contract Requirements

==> 1;;SPECIFICATIONS <== Specification's Title

==> 2;INDEX.PDF;Table of Contents <== Index of Specifications

DIVISION 1 - GENERAL REQUIREMENTS

01000 Additional Special Contract Requirements

01300 Submittal Procedures

01440 Contractor Quality Control SAM Form 696

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Combining PDF files

Step 3: **Creating the Build file (Continued)**

Set levels and add file names to each line.

SPECS.PDF
1;COVER.PDF;Cover
1;;CONTRACT CLAUSES
2;CLAUSES.PDF;Table of Contents
2;00100.PDF;00100 Instructions, Conditions, and Notices to Bidders
2;00600.PDF;00600 Representations & Certifications
2;00800.PDF;00800 Special Contract Requirements
1;;SPECIFICATIONS
2;INDEX.PDF;Table of Contents
2;;DIVISION 1 - GENERAL REQUIREMENTS
3;01000.PDF;01000 Additional Special Contract Requirements
3;01300.PDF;01300 Submittal Procedures
3;01440.PDF;01440 Contractor Quality Control SAM Form 696

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Combining PDF files

Step 4: **Verifying the file with AcroChk**

Under the group “AcroChk” select “AcroChk”

Select the file C:\EBS\WORKSPEC\PDF\SPECS.BLD

Click on “Ok”

Acrochk will display any missing or unlisted files in your build file.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Combining PDF files

<u>Step 5:</u> Building the SPECS.PDF file using AcroBld

NOTE: Make sure all files are in PDF format. If you receive files that have been placed into PDF format by someone, it is suggested that you open the file(s) to make sure it is not corrupted.

Under the group “AcroBld”, select “AcroBld”
Select the file C:\EBS\WORKSHOP\PDF\SPECS.BLD
Click on “Ok”
AcroBld will merge all the files listed in you build file into one PDF file
When the “Cancel” button changes to “Exit”, the program is done
Press the “Exit” button to exit the program

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Combining PDF files

Step 6: **Setting the opening parameters for SPECS.PDF**

Under the group “Adobe Acrobat”, select “Acrobat Exchange 3.0”
Open the file C:\EBS\WORKSHOP\PDF\SPECS.PDF
File | Document Info | Open
Click on “Bookmarks and Page”
Click on “Ok”
File | Save
File | Exit

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Combining PDF files

Master Build File (Easy as 1-2-3)

- Mobile District maintains a MASTER BUILD FILE which contains all contract clause information (i.e., clauses, forms, signs) and a complete listing of technical specifications from Divisions 01 - 16.
- The master build file is edited accordingly with the solicitation. The file is then renamed and is housed in the project directory. This enables the file to be re-edited in the event of amendments.
- This method is especially helpful should the amendment be processed and sent to the Contractors' on CD. The original build file, which contains the original contract clauses and specifications. The file is then edited to contain the only amendment information. The amended information and the original solicitation info is then placed on the CD for distribution to the Contractors'.
- Placing the original information in addition to the amended infor on the CD, allows the Contractors easy access of seeing everything pertaining to the solicitation without having to deal with paper and/or diskettes for amendments.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Combining PDF files

EXAMPLE MASTER BUILD FILE

- In keeping a Master Build File on hand, you can edit the build file and save it with a new name to the project directory. This will allow you to edit the build file for any future amendments. SEE EXAMPLE BELOW:

- EXAMPLE
- (NAME OF FILE (i.e., 97B0024.PDF)
- 1;cover.pdf;Project Cover Sheet
- 1;;CONTRACT CLAUSES
- 2;toc1.pdf;Index of Contract Clauses
- 2;SF1442.pdf;Standard Form 1442 (NAME OF FORM)
- 1;;TECHNICAL SPECIFICATIONS
- 2;toc2.pdf;Index of Specifications
- 2;;Division 01
- 3;01000.pdf;01000 Additional Special Contract Requirements
- 2;;Division 02
- 3;02050.pdf;02050 Demolition

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Autorun/ReadMe

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Autorun/ReadMe

Autorun.inf

Autorun.inf is a file that tells Win95 and NT 4.0 what program should be executed when the CD is loaded into the drive. It also describes what icon should be displayed in Explorer.

Readme.txt

Readme.txt file should contain generic information describing what is on the CD and how to use the supplied software. A road map of the files and directories will aid Plan Holders in accessing the information stored on the CD.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Contract Viewer

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Contract Viewer

- Provides a user interface to Electronic Bid Sets
- Executes appropriate program to view desired item
- Is configurable via the INDEX.CON file

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Contract Viewer

Format of the CON file

[Project]
ContractNo = DACA-45-97-B-0009
ContractTitle = Enlisted Barracks Complex @ Fort Carson, CO
Notice = Bid Open Date: 01/30/97 2:00pm

[Notes]
Item01 = Contract Summary Notes|specs\summary.pdf
Item02 = Plan Holders List|specs\planhold.pdf

[Specs]
Item01 = Specifications|specs\specs.pdf

[Drawings]
Item01 = Barracks|plans\barracks.svd
Item02 = Company OPS.BLDG.#750|plans\bldg750.svd
Item03 = Company OPS.BLDG.#752 & #754|plans\bldg752.svd
Item04 = All Drawings|plans\index.svd

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Contract Viewer

Format of the CON file (Continued)

[Hints]
NoteButton = Notes
SpecButton = Specs
DrawingButton = Drawings

[Viewers]
.PDF = acroread/acroread.exe
.SVD = svread/svreader.exe

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Quality Control

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Quality Control

- Before the Premaster CD is Created:
  - Quality Checks for .CAL files:
  - Quality Checks for the INDEX.SVD file:
  - Quality Checks for the SPECS.PDF file:
  - Quality Checks of the directory structure for the CD:
  - Quality Checks for the INDEX.CON file:
  - Quality Checks for the readers:
  - Quality Checks for Content and Viruses:
  - Quality Checks after cutting the premaster CD:
  - Amendment Quality Checking:

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Quality Control

- Quality Checks for .CAL files:
  - View each file with SourceView Author for completeness (is it all there?)
  - Make sure the scale is correct by measuring the width or height of each sheet, using the measurement tool in SourceView. The distance should be very close to the full size printed sheet.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Quality Control

- Quality Checks for the INDEX.SVD file:
  - Open the INDEX.SVD file with the SourceView Reader
  - Make sure the file list appears in the proper format and that it does include all the drawing sheets.
  - Click on each sheet or drawing file, make sure a drawing appears for each sheet listed in the index.
  - Make sure the file is oriented correctly with the bottom of the sheet at the bottom of the screen.
- It is important to check the file with the reader so that you see exactly what the Plan Holders are going to see. If you are in SourceView Author, it is easy to save the INDEX.SVD file without making it “Sendable”.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Quality Control

- Quality Checks for the SPECS.PDF file:
  - Click on each bookmark to make sure it is linked to the correct page.
  - Page thru the document, making sure the sections were inserted in proper order so that if the total file is printed it will print in proper order.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Quality Control

- Quality Checks of the directory structure for the CD:
  - Make sure the Contract Viewer, the SourceView Reader, and the Adobe Acrobat Reader programs exist
  - Verify the README.TXT and AUTORUN.INF files are in the root directory
  - Check that the .PDF, .CAL, and .SVD files are in the proper directories

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Quality Control

- Quality Checks for the INDEX.CON file:
  - Verify that the INDEX.CON is in the root directory of the CD
  - Check the project information: (i.e. Title, Solicitation No., and Bid Opening date)
  - Make sure all the files it references exist and are in the proper directories

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Quality Control

- Quality Checks for the readers:
  - Execute the CONTRACT.EXE program
  - Make sure the Bid Opening Date comes up and is correct
  - Make sure the proper project name appears when the cursor is moved over the viewer and the correct contract number appears when the viewer is minimized or tabbed to in Windows
  - Verify that each reader opens to the correct file when each of the buttons on the viewer is selected
  - Make sure the help file appears when the ? Is selected.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Quality Control

- Quality Checks for Content and Viruses:
  - Have all personnel check their portion of the solicitation
  - Run a virus Check on the files

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Quality Control

- Quality Checks after cutting the premaster CD:
  - Have someone, other than the person that prepared the CD, run through the same verification checks as stated in “Quality Checks for the INDEX.CON file:”
  - Make 2 premaster CDs, keep one and send one to the reproduction contractor.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Quality Control

- Amendment Quality Checking:
  - Verify that all drawing work is completed in the CADD files and word processing files before creating the .CAL or .PDF files.
  - When creating .CAL and .PDF files, make the same checks as mentioned above.
  - Create the AMEND*.CON file and check the function of the amendment from the server or workstation before putting the files on the floppies or CD.
  - Open the solicitation, then the amendment. Make sure notes that are suppose to appear show up when the amendment is opened. Check to see that all the amendments open and that all bookmarks link to the correct section or form of the amendment
  - Put the files on the floppies, then run the CONTRACT.EXE from the CD and check to make sure all portions of the amendments can be accessed from the floppies.
  - Make sure the disks are labeled correctly and that the files identified in the AMEND*.CON file are on the proper disk.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating a Master CD

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating a Master CD

- HARDWARE REQUIREMENTS:
- The minimum hardware requirements necessary to run the applications are:
- ROM Maker
  - 2/4X ROM MAKER (Minimum)
  - 1 Gig Hard Drive (Built in with the ROM Maker)(recommend)
- WORKSTATION
  - 486/66 Personal computer (Workstation)
  - 16 or 32MB RAM
  - 1 Gig Hard Drive
  - Network Board

  NOTE: The configuration above should be networked.
- SOFTWARE REQUIRMENTS:
- The minimum software requirements necessary to run the applications are:
  - Windows NT 3.51
  - Windows 95,Dos,Windows 3.1
- Archiver or Equal

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

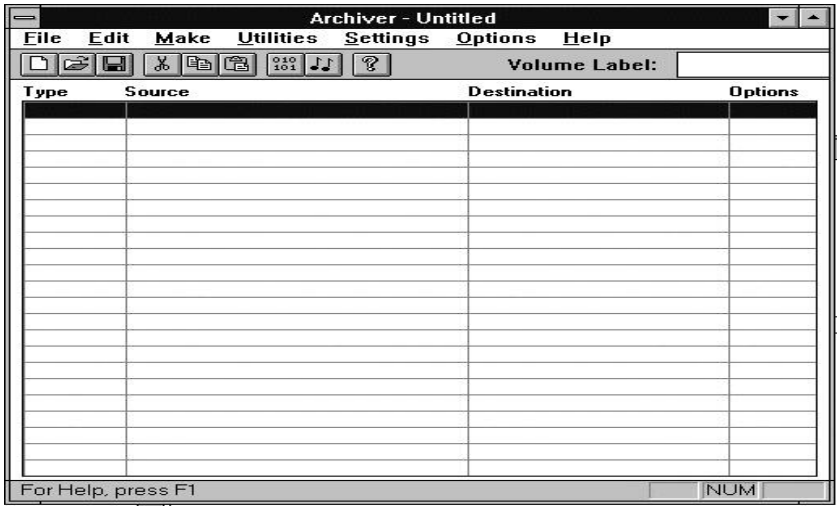
NOTE

Creating a Master CD

CONFIGURATION:

The minimum configuration requirements necessary to run the applications are:

- (**Archiver**)The first step is to load CD ROM software on the workstation. Once the hardware /software is loaded you can start making your CD's. **Example:** It should look like this:

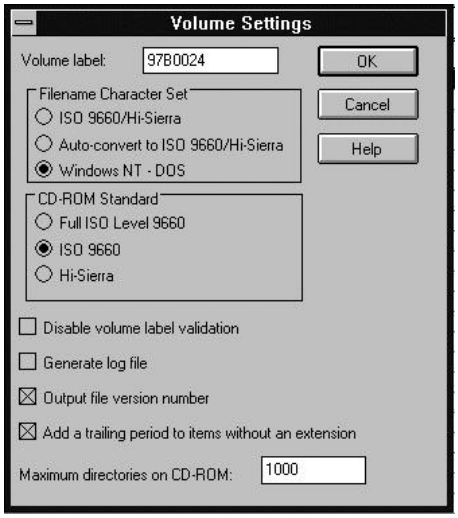


TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating a Master CD

The first thing that needs to be done is to setup the settings for the CD. You need to a volume label and what type of CD you want to create. **Example:** It should look like this:

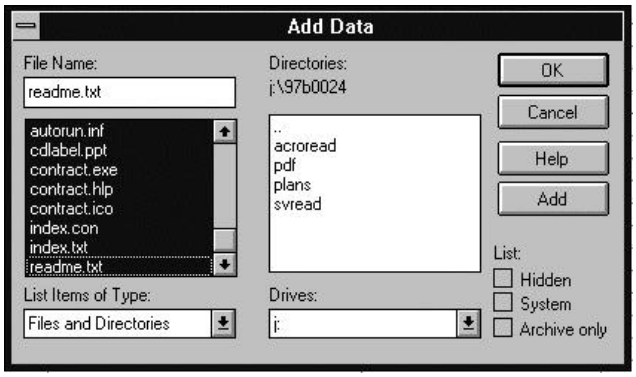


TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating a Master CD

We use the Solicitation Number for our volume label. We selected the Windows NT-DOS for the Filename Character Set. This will allow us to have file names with a dash or a character. Once you set up the volume labels you ready to add the data. Example: It should look like this:

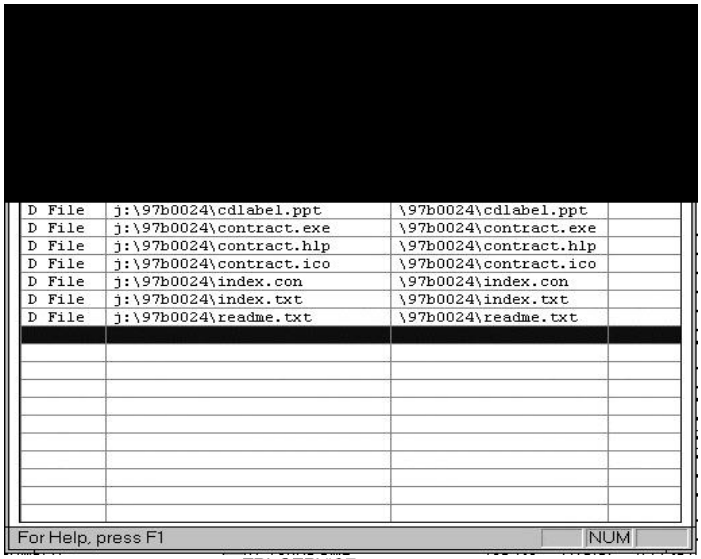


TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating a Master CD

The next step to do is to select and add your files. One you have added your data you may have a box that looks like this:

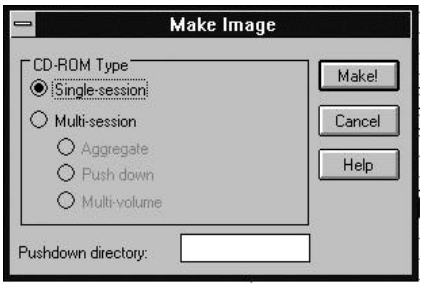


TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating a Master CD

The next step to do is to make your CD. You may have a box that looks like this:



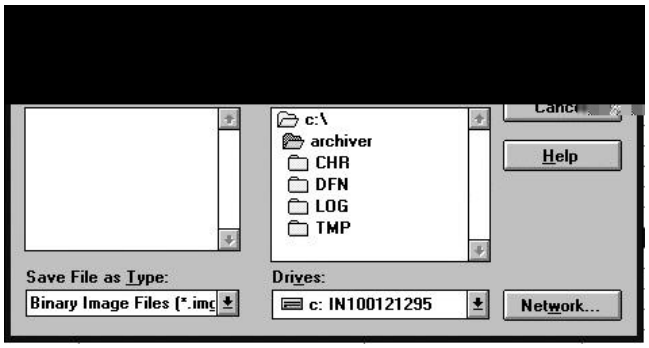
When you generate a CD you have to create a Image file. This Image file mirrors all the data that you added. You can save this image file and create another CD without going through the above steps.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating a Master CD

You must give your Image file a name. We use the solicitation number this will allow us to track the jobs that we are generating for the CD. You may have a box that looks like this:

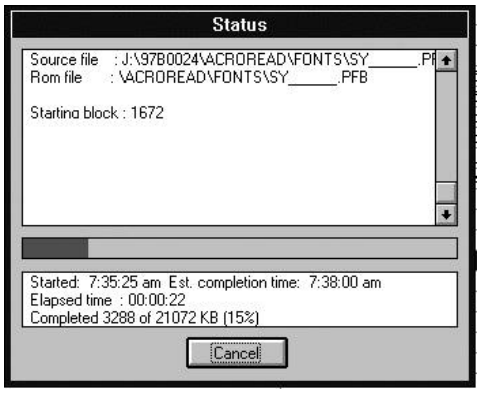


TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Creating a Master CD

Once your Image file is created, you are on your way to making the CD. You may have a box that looks like this:



TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CD Reproduction & Distribution

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CD Reproduction & Distribution

Reproduction Methods Available

- In-House Reproduction: Utilizes a CD duplicator to reproduce CD's for projects and amendments with no more than 60 prospective bidders on the mailing list. 100 CD's can be reproduced in one day.
- Commercial Reproduction: Utilizes commercial industrial equipment to produce mass quantities of CD's in excess of in-house capability. A glass master is required for this type of reproduction and is created the contractor to produce a higher quality product.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CD Reproduction & Distribution

Two Contracting Methods

- **Purchase Order:** This method can be used in the interim until an electronic reproduction contract is in place. If the purchase order is below $2,500 it does not have to be competed. The Omaha District currently uses this method and typically orders a minimum of 300 CD's per project. The costs include $450 for glass mastering and $1.75 per CD which includes tryvek sleeve and mailer insertion. Average cost per project is approximately $975. The benefit of using a purchase order is being able to select a proven quality contractor.
- **IDQ Commercial Item Contract:** Sealed Bidding Process can have a contract in place in 60 days. Request for Proposal Method can have a contract in place in 90 days. Contract will most likely not be able to be set aside for small businesses because the cost of the equipment involved. The benefits include a faster response time, lower costs, and Government establishes response time and minimum order.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CD Reproduction & Distribution

CD Reproduction Costs

Quantity	Item	ea	3 Day	7 Day
1	Mastering	$450.00	$450.00	$450.00
1	3 Day Turn Around Premium	$450.00	$450.00	
2	Film Creation	$50.00	$100.00	$100.00
300	Replication	$1.25	$375.00	$375.00
300	Tyvek	$0.07	$21.00	$21.00
300	Mailer	$0.25	$75.00	$75.00
300	Insertion	$0.02	$6.00	$6.00
300	Label Creation	$0.05	$15.00	$15.00
300	Label Application	$0.03	$9.00	$9.00
1	Label Freight	$13.00	$13.00	$13.00
Total			1,514.00	1,064.00

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CD Reproduction & Distribution

NOTE

CD Reproduction & Distribution

- **Internal Distribution:** The objective is to move toward a paperless distribution system. In the interim some offices will still require paper copies of the solicitation. For example, the Fort Worth District has reduced distribution of paper to three copies of the drawings. Those three copies are distributed within Construction and Engineering Divisions. Specifications are printed by each reviewing office. It is the responsibility of each reviewing office to obtain additional copies. In Fort Worth internal review at time of issuance is accomplished through the use of the Contract Viewer and the Local Area Network. It is at the discretion of each Activity to decide the most cost-effective process for handling internal distribution.
- **External Distribution:** This involves mailing the CD's to the Contractors. Each prospective bidder on the planholder's list receives one copy of the solicitation and associated documents on the CD. An additional copy will be sent in the event a damaged CD is received.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Electronic Amendments

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Electronic Amendments

- Electronic Amendment Options Are:
  - CD's - Used if files would exceed three (3) floppy disks.
  - Floppy Disks - Used if it doesn't exceed three (3) floppy disks.
  - FAX - If amendment is no more than five (5) pages.
  - Mail - 55 cents to $1.50 to mail each electronic copy of the amendment.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Electronic Amendments

- Electronic Amendment Process:
  - Entire sections or drawing sheets can easily be reissued.
  - Changes are identified by Amendment number and by marking the text. (i.e., underline, bold, italics.....)
  - Editing the .CON File.
  - Recommend duplication in-house on a floppy/CD-ROM duplicator.

*Do not recommend commercial items contract for amendments due to short suspense.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CDROM Lab

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CDROM Lab

The purpose of this lab is to give you an overall view of how to put a job together.

- Here are the task to be performed:
  - Create PDF files using Microsoft Word
  - Modify an existing BLD file
  - Combine the PDF files into the SPECS.PDF file
  - Modify the Source View Document for displaying the plans
  - Make the SVD file viewable by Sourve View Reader
  - Modify the INDEX.CON file
  - Perform a Quality Check

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CDROM Lab

<u>Step 1:</u> Creating PDF files with Microsoft Word:

Under the group “Microsoft Office”, select “Word”

Select File | Open

Switch to the C:\EBS\SPECS directory

Open a specification

File | Print | Name

Select “Acrobat PDFWriter for NT”

Click on “Ok”

Save PDF File As:Type in the section number of the file being printed

File | Close

Repeat until all files have been printed to PDF then exit Word

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CDROM Lab

Step 2: **Move PDF files to C:\EBS\SPECS\PDF directory**

Under the group “Main”, select “File Manager”

View the files in the C:\EBS\SPECS directory

Select all the PDF files

Drag and Drop them into the C:\EBS\SPECS\PDF directory

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CDROM Lab

Step 3: **Creating the Build file**

Under the group “Accessories”, select “NotePad”

Open the file C:\EBS\SPECS\PDF\SPECS.BLD

Note: This file is the BLD file from the Adobe Acrobat Exchange section.

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CDROM Lab

Step 3: **Creating the Build file (Continued)**

SPECS.PDF
1;COVER.PDF;Cover
1;;CONTRACT CLAUSES
2;CLAUSES.PDF;Table of Contents
2;00100.PDF;00100 Instructions, Conditions, and Notices to Bidders
2;00600.PDF;00600 Representations & Certifications
2;00800.PDF;00800 Special Contract Requirements
1;;SPECIFICATIONS
2;INDEX.PDF;Table of Contents
2;;DIVISION 1 - GENERAL REQUIREMENTS
3;01000.PDF;01000 Additional Special Contract Requirements
3;01300.PDF;01300 Submittal Procedures
3;01440.PDF;01440 Contractor Quality Control SAM Form 696
….

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CDROM Lab

Step 4: Verifying the file with AcroChk

Under the group “AcroChk” select “AcroChk”
Select the file C:\EBS\SPECS\PDF\SPECS.BLD
Click on “Ok”
Acrochk will display any missing or unlisted files in your build file.

Incorporate 0270.pdf by adding the following lines to the end of your BLD file:
2;;DIVISION 2 - SITE WORK
3;02070.PDF;02070 Demolition

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CDROM Lab

Step 5: Building the SPECS.PDF file using AcroBld

Under the group “AcroBld”, select “AcroBld”
Select the file C:\EBS\SPECS\PDF\SPECS.BLD
Click on “Ok”
AcroBld will merge all the files listed in you BLD file into one PDF file
When the “Cancel” button changes to “Exit”, the program is done
Press the “Exit” button to exit the program

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CDROM Lab

Step 6: **Setting the opening parameters for SPECS.PDF**

Under the group “Adobe Acrobat”, select “Acrobat Exchange 3.0”
Open the file C:\EBS\SPECS\PDF\SPECS.PDF
File | Document Info | Open
Click on “Bookmarks and Page”
Click on “Ok”
File | Save
File | Exit
With “File Manager” move the file “SPECS.PDF” to the C:\LAB directory

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CDROM Lab

Step 7: Creating the SVD file

Under the group “Accessories”, select “NotePad”

Open the file C:\LAB\PLANS\INDEX.TXT

Edit the file to look like this:

SVDOC;VER2.29 LAB EBS CLASS AT WES

XCE347.CAL Cover

X1E347.CAL MCD-77-1 X1 - Index of Drawings, Symbols and Abbreviations

X2E347.CAL MCD-77-2 X2 - Project Location Map

R01E347.CAL MCD-77-3 R1 - Existing Conditions

H01E347.CAL MCD-77-4 H1 - Industrial Waste System

H02E347.CAL MCD-77-5 H2 - Oil-Water Separator

;ENDOFBLOCK

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CDROM Lab

Step 8: Making the SVD file sendable

Using File Manager, copy the INDEX.TXT file to INDEX.SVD

Under the “Source View” group, select “Source View Author”

File | Open

Select the file C:\LAB\PLANS\INDEX.SVD

Author | Document Info

Check the box “Sendable”

File | Save

File | Exit

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CDROM Lab

Step 9: Creating the INDEX.CON file

Under the group “Accessories”, select “NotePad”

Select the file C:\LAB\INDEX.CON

Edit the file to look like this:

[Project]
ContractNo = LAB
ContractTitle = EBS TRAINING CLASS AT WES
Notice = Bid Open Date:04/04/97 2:00pm

[Hints]
NoteButton = Notes
SpecButton = Specs
DrawingButton = Drawings

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CDROM Lab

Step 9: Creating the INDEX.CON file (Continued)

[Viewers]
.PDF = acroread/acroread.exe
.SVD = svread/svreader.exe

[Notes]

[Drawings]
Item01 = Drawings|PLANS\INDEX.SVD

[Specs]
Item01 = Clauses and Specifications$PECS.PDF

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

CDROM Lab

Step 10: Quality Check

Under the group “Main”, select “File Manager”
Switch to the C:\LAB directory
Double click on the CONTRACT.EXE program
Verify the date in the message box is correct.
Click on the  button
Select “Clauses and Specifications”
Click on each bookmark, verifying it is linked to the correct page.
Close Acrobat Exchange
Alt-Tab back to the Contract Viewer
Click on the  button
Select “Drawings”
Click OK
Using the F2 key, select each sheet in the drawing file
Make sure each drawing appears and is oriented correctly
Close Source View Reader

TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

NOTE

Case Studies

Case Study - USACE Fort Worth District

Background

The Fort Worth District issued the first solicitation utilizing Compact Disk and Internet media in April of 1996 following the recommended USACE guidelines. The project was the Dormitory Complex, at Edwards Air Force Base, Lancaster California. This project was estimated at $10.6 million with three specification volumes and 220 drawings. Out of the one hundred thirty three (133) contractors that requested a copy of the plans and specifications, five (5) contractors submitted bids. All five bids were considered to be within an awardable range. The Dormitory Complex was awarded June 26, 1996. No protest was received.

Organization/Coordination

Once the Fort Worth District was tasked with accomplishing the first electronic solicitation on Compact Disk and the Internet, a team had to be developed in order to coordinate the process. The functional team that was developed consisted of Contracting Division, Engineering Division - Specifications Section, Engineering Division - CADD systems manager, Engineering Division - A&E Management branch, Information Management, and Project Management. Team member's supervisors had to be coordinated with in order to ensure that complete cooperation would be allowed. This process took a lot of time and these team members had to be dedicated to making the process work. Although full time employee dedication was not required, considerable time was needed throughout the entire process.

Project

Procedure

Pre-Bid Conference

Before the Dormitory Project was even issued, it was necessary to test the public to see what interest would be generated from this new technology. Contracting Division sent out over 1500 pre-solicitation notices to construction contractors from across the country requesting their participation at an information meeting in Ontario, California in February 1996. Seventy (70) contractors showed up to listen and make comments about a demo project created by Headquarters and the Corps of Engineers Waterways Experiment Station (WES). A member of the audience was requested to use the software that was placed on the compact disk to view the demo project. This volunteer quickly adapted to the user-friendly software. Out of the 70 contractors, only two (2) stated concerns that the Government was creating a hardship on Small Business. The rest of the contractors appeared to be ready for the new technology to be used on construction contracts.

After the Ontario meeting, it became apparent that bidders were ready to move into the next age of issuing plans and specifications. To get the project started, several meetings were held to identify team member responsibilities. Contracting Division would be responsible for getting the contract

clauses out of its SAACONS system, Engineering Division - A&E Management Branch would be responsible for obtaining the drawings in an electronic format from the A&E, Engineering Division - Specifications section would be responsible for the technical specifications, Engineering Division - CADD System Manager would be responsible for converting the A&E files into .cal files and placing the job on the CD and the Internet. After the broad responsibilities were assigned, specifics had to be developed.

Advertisement

The specifics were not that easily identifiable since no-one had completed an electronic solicitation. With the help of WES, a checklist was developed for things that needed to be accomplished before we started processing any files. At the same time, Contracting Division synopsized the project in the Commerce Business Daily. Exact wording stated that this job was to be issued utilizing Compact Disk and Internet media only. No hard copies were going to be mailed to the contractor. The synopsis also stated that the contractor could find the solicitation files on the Internet at "http://tsn.wes.army.mil/contract". With the synopsis published in the CBD, the clock had now started. It became apparent early that we need one place where we could keep all the files. A solicitation directory was created on one of the district's LAN servers, and participants were given access so that all files could be saved to one location. Once all the files were completed, they could easily be transferred to a CD and the Internet.

Standards

For the Edwards Dormitory Project and future projects, it was decided by WES that we would use Adobe Acrobat reader to view the specifications, contract clauses and forms. SourceView reader would be used to view the drawings. In conjunction with the 2 viewers a windows contract viewer was created by Ronson Kung at WES that combined the 2 viewers into a user friendly access to the contract documents on the CD.

Specifications and Contract Clause Preparation

The development of the plans and specifications occurred the same way that it had always occurred. Contracting Division developed the front end package while Specifications Section prepared the technical sections in WordPerfect and the A/E designer prepared drawings in MicroStation. We also had 18 Autocad drawings submitted. The difference in the normal operating procedure began when we had to convert the text files into .pdf files and the drawings into .cal files. In order to get the clauses out of SAACONS in an electronic format, Contracting Division had to use a local interface option and FTP the file into a directory that could be accessed by a word processor. Once the files were imported as ASCII text, the contract specialist then had to clean up the file so that it would be presentable to the bidder. After the clauses looked the way they were supposed to, the file was then converted into .pdf using the .pdf printer driver supplied by Adobe Acrobat Exchange. After converting the files to .pdf, bookmarks and links had to be established in order to allow the bidder to easily move through the electronic document. Both Contracting Division and Specification Section had to bookmark and link files in the clauses and technical specifications. The process of converting and bookmarking or linking took about 3 days.

Problems we had to overcome creating Specs and Contract Documents are as follows:

-The conversion process was not a smooth one. A problem that was identified early was that when

importing the SAACONS data into WordPefect, a non-proportional font needed to be used. The font that was selected to be the standard was Courier 10pt.

-Even though the conversion allowed information to be transferred from SAACONS into WordPerfect, a lot of cleanup had to be accomplished because not all of the tabs and margin setting were recognized.

- Some of the spec pages had to be scanned. This took extra time to wait for the scanning to be completed. Additionally, scanned images could not fully utilize the search capabilities of Adobe Acrobat.

- There was some resistance to the new process, however adaptation was necessary.

Drawing Preparation

After the clauses and specifications were ready for the electronic issuance, the drawings needed to be converted into the .cal format. The .cal files were created from MicroStation 95 using SVCAPT.DRV print driver that was provided with SourceView. This was done on a 486/50 PC using Windows for Workgroups. We received the drawings one week before we were supposed to issue the job. This presented a huge problem. Comments had to be made and returned to the A&E to be incorporated. Once the comments were incorporated, the files then had to be returned to the District and converted into .cal format. Because of the shortage of time, the project had to be delayed until the following week. This gave the CADD Systems Manger time to convert the MicroStation files into the .cal format. The time to convert one drawing into the correct .cal format took three (3) to five (5) minutes per file. We had 200 drawing files to process. Additionally, a SourceView index had to be created for the drawings. This took about three (3) hours using cut and paste in windows. We also received eighteen (18) Autocad files to process. We printed postscript files then ran them through Ghostscript (batch) to create the .cal files. This total process took about 2 1/2 days.

Some of the problems that we had to overcome preparing drawing files included the following:

-Converting MicroStation files with dithered lines did not convert well. We had our A&E use dashed lines at a low line weight.

- AutoCad files - The A&E forgot to send font and shape files. This took some time for the A&E to get these things to us.

- Using Postscript print driver that comes with Autocad, we were not able to rotate the files (28 x 40) where the bottom of the sheet was at the bottom of the screen in the viewer.

- We did not receive a text file from the A&E with the sheet numbers and drawing titles on it, so we cut and pasted from the drawing index.

Publication/Reproduction

Once the files were all converted and the problems solved, the issue of getting the job placed on the Compact Disks and the Internet had to be addressed.

CD-ROM

The CD was not much of a problem. However, we did have to cut three CDs before the final version was sent to the reproduction contractor. The reason for this was that minor bookmarks and links were not established for a limited number of clauses and technical specifications. Although a bookmark appeared, when you touched it with your mouse, the program didn't take you anywhere. These problems were corrected and the CD was ready to be sent out for reproduction. Contracting Division had issued a purchase order for the reproduction of the Compact Disks because the price was under $2,500.00 and an IDQ contract for CD reproduction had not yet been established. The costs of the master CD was $1,300.00 for the master on a five day turn-around, and $1.25 per CD thereafter. The total cost for the solicitation and all amendments was less than $2,500.00. Comparatively, the cost for hardcopy reproduction on this size job would have been $34,200.00. Using CD ROM and the Internet, the additional labor involved for bookmarking, linking, and converting drawings, brought the cost of reproduction up close to $6,000.00 total. As you can see, this is a substantial cost savings. The Internet was the next big question.

Internet

We had several problems with the Web page. Engineering, Design Branch CADD section was operating the web page. All other offices had to coordinate with them for what they needed or wanted on the Web page. Contracting - Issue dates, bid opening dates, and amendments, all had to be coordinated. The development of the web page/database software was being developed during the time we were preparing this project and is still being completed. Another problem was that the viewer that we chose to use for the plans did not allow the plans to be viewed over the Internet. This software company however, chose to make this a reality and provided a method of accomplishing this goal. The Web page was established with the help of WES. Our CADD people were not Internet experts when we began this process, but with the help of Ronson Kung specifically, the issuance on the Internet was able to continue. We used Windows NT web server, and Website software with Cold Fusion. Our database at the time was Foxpro 2.5. Our database is now Microsoft Access 2.0.

Recommendations

It seems that the hardest part of this entire process is issuing amendments on floppy disks. Project schedules are critical and cannot be delayed because we are attempting a new process of doing business. We found on the Edwards Dormitory project that we were able to issue early amendments with few problems. This however changed as we came closer to the bid opening date. It took 48 hours turn-around time for us to send the reproduction contractor the master floppy, for the contractor to reproduce the floppy, and for the reproduced copies to be returned to us through the mail. If we were to have a Compact Disk issued as an amendment (used if over three floppies), the process would require four to five days. This is not acceptable. It is Fort Worth's recommendation that any office attempting electronic advertising, should buy or lease a floppy and compact disk reproducer. Considering that once the Fort Worth District is completely electronic, a potential 90,000 floppy disks could be issued in one year's time. This is based on 150 jobs in a year at four (4) amendments average per job. These are real figures. Having in-house capability for amendments is essential for our mission.

Producing the .cal files on a PC using the windows SVCAPT.DRV print driver was very time consuming for a technician or designer to wait up to 5 minutes for each file. After the Edwards Dormitory project we found out that Intergraph had a product called Interplot Offline Raster Driver Pack that works on our Windows NT print server in conjunction with Iplotserver. Using this product

with MicroStation/Iplot client on our PC we can send the print file to a print queue on the server in a few seconds and then let the print server process the files. This allows the technician or designer's PC to be freed up to do other work instead of waiting on the .cal file to finish. Fort Worth recommends using this product to save hours of time for each project waiting on .cal files to process on the PC.

Setting up this new method of creating contract documents involved several offices and some very different methods than our traditional way of doing business. It will be very important to have all offices involved in the process to be committed and well informed on the total process during the initial development of the new procedures. Fort Worth recommends a careful review of the Electronic Bid Solicitation EBS Check List that was created by the EBS USACE team before a Corps District or other DOD office begins creating Electronic Bid Solicitation documents.

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Author: Denver Heath, Jim McKenzie
Updated 09/04/96

Case Study - USACE Omaha District

Background

The Omaha District Electronic Bid Set was the second team project to be advertised on CD-ROM. The project selected was a $30 million Enlisted Barracks Complex at Fort Carson, Colorado. This was also the first hard metric project produced by the Omaha District utilizing in-house design.

Organization/Coordination

District Team members for the Electronic Bid Set included Drew Anderson, Engineering Division, and Cindy Siford, Contracting Division.

Project

An informational meeting for this project was held in Colorado Springs, Colorado, on 12 June 1996. Information regarding this meeting was included in the CBD announcement for the solicitation as well as on the Internet. The meeting was held at the Pikes Peak Community College with approximately 50 in attendance. Presentations were given by Ronson Kung, Justin Taylor, Denver Heath, Drew Anderson, Cindy Siford, and Alan Ruff. CD-ROMs containing the Fort Worth District project were distributed at this meeting. A question and answer period followed the presentation.

Procedure

The official paper contract solicitation was replaced with an electronic version distributed on CD-ROM. The Internet was used to advertise the solicitation, register prospective bidders, list registered plan holders, access all associated data files provided on the CD-ROM, and display tentative post-bid award results.

Structure of CD-ROM :

\README.TXT Text file that defines what is on the CD.

\CONTRACT.EXE Contract Viewer program written by Waterways Experiment Station (WES).

\CONTRACT.HLP The help file for the Contract Viewer.

\INDEX.CON File index for this solicitation.

\SETUP.EXE Installs the Contract Viewer program into Windows.

\ACROREAD This directory contains the Adobe Acrobat Reader.

\SVREAD This directory contains the SourceView Reader.

\CLAUSES\INDEX.PDF This is the index for the Clauses.

\CLAUSES\SUMMARY.PDF Contract Summary notes.

\CLAUSES\PLANHOLD.PDF Plan Holder's list.

\CLAUSES*.PDF These files are the Contract Clauses.

\PLANS\INDEX.SVD This is the index for all the drawings.

\PLANS\INDEX.TXT Same index in ASCII format.

\PLANS\BARRACKS.SVD This is the index for the Barrack's drawings.

\PLANS\BARRACKS.TXT Same index in ASCII format.

\PLANS\BLDG750.SVD This is the index for the Company OPS BLDG #750 drawings.

\PLANS\BLDG750.TXT Same index in ASCII format.

\PLANS\BLDG752.SVD This is the index for the Company OPS BLDG #752 and #754 drawings.

\PLANS\BLDG752.TXT Same index in ASCII format.

\PLANS*.CAL These files are the plans.

\SPECS\INDEX.PDF This is the Table of Contents for the Specifications.

\SPECS*.PDF These files are the Specifications.

District Project Team Members:

Contracting: Cindy Siford, Contract Specialist/EBS Team Member; Jim Opitz, Contract Specialist

Engineering Division: Alan Ruff, Project Manager

Design: Bill Rafferty, Technical Manager

Specifications: Drew Anderson, Specs Section; Doug Larsen, Specwriter, Specs Section

Publication/Reproduction

Reproduced 35 hard copies for in-house distribution at a cost of $12,000. CDs were reproduced by BQC, Inc of Council Bluffs, Iowa. A minimum order of 300 with a 10 percent over or under run was required. Received 331 copies of original solicitation from CD manufacturer for distribution. Distributed the CD to 138 requesters.

Amendments: Reissued CD because number of changes would have required issuing a minimum of 7

floppy disks. More economical to reissue CD. Amendment No. 2 was issued on a 3.5" floppy disk. Amendments 3 and 4 were faxed to contractors using fax software.

Number of Planholders for this project was as follows: 19 General Contractors; 25 Planrooms; 65 Subcontractors; 29 Suppliers for a total of 138.

Costs Associated with Project :

Reproduction of Original CD: Mastering fee $450.00, 300 CD's at $1.50 ea. $450.00, 1000 Disk mailers at .163 each $163.00; Tyvek sleeves insertion 300 at .09 ea. $27.00 for a total of $1090.00. (Disk mailers had to be purchased in bulk amount of 1000 to be used by all Omaha District reproduction jobs.)

Paper reproduction of plans and specs for in-house distribution: $12,000.

Amendment No. 1: Reproduction of Reissued CD: Mastering fee $450.00, 333 CD's at 1.50 each $499.50; Insertion of 333 disks at .06 each $19.98; for a total of $969.48

Amendment No. 2: Floppy Disk - created and reproduced in-house; 138 diskettes at .33 each $45.54. Disk mailers 138 mailers at .33 each $45.54. For a total of $91.08.

Amendment No. 3: FAXED

Amendment No. 4: FAXED

Floppy Disk Copier : A machine was purchased from CopyPro to copy 3.5" floppy disks for Amendment purposes. The machine cost $3,824.10. This included the disk copier, a spare high speed drive, and a 150 disk bin set. The machine is capable of copying 165 disks per hour.

Number of Bidders for this project: three. Bid opening was conducted on 22 August 96 at 2:00 p.m.

Survey Results

Questionnaire: Have not received any responses to survey that was distributed with Fort Worth demo. Did not distribute the survey with CD or amended CD. Distributed survey with amendment No. 0002 and have received two responses to date. Bidders at the bid opening felt that the CD-ROM did not place any additional burden on their company. They stated that the subcontractors were experiencing the most problems. This is because most small subcontractors do not have access to computers. The larger General Contractors have most of the equipment they need to view the documents. Printing for the most part was taken care of by printing companies.

Recommendation

None

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Author: Cindy Siford, Drew Anderson

http://tsn.wes.army.mil/report/CaseStudyOmaha.htm

Updated 09/04/96

Case Study - Sacramento District

Background

Since Nov. 1993, SPK has been actively developing the capability of electronic transfer of bid documents. We have a SOP for transferring electronic files of bid documents to South Pacific Division. We also created and successfully implemented the electronic plan room concept with a Bulletin Board System (BBS) for both modem & Internet (ftp & http) access. The BBS was used to Request Proposals for two Army Reserve Facilities.

In March 1995, SPK read the Proposed New Development information on Tri-Service CADD Web Pages and volunteered as a test site for the EBS Initiative. In Feb 1996, we solicited five contractors to comment on Tri-Service's first prototype CD. Three of the four responses were favorable. In June 1996, we prepared our first CD to measure & document the process and improvements needed. Our first public CD was produced in July 1996.

Organization/Coordination

We have a management type EBS team consisting of Mr. Ron Miller, Chief Contracting; Mr. Steve Freitas, Criteria Mgmt Work Leader; Mr. Glen Hand, IMO Programming. They have selected the projects, provided upline status reports, coordinated with our lawyers, DPS, and potential bidders. Mr. Freitas is also preparing Scopes of Work for AE design firms and Standard Operating Procedures for the EBS within SPK.

Coordination of the documents onto the CD has been between Mr. Jim Dyer, AutoCAD support; Ms. Mary Diel, Microstation, NT & scanning support; Ms. Lere Busch, specifications, file coordination, quality control & CD writing; and Ms. Kathern Bond, EBS readers & viewers coordination with Tri-Service Center.

Project

Our first public CD was actually three projects previously advertised (greater than one year ago). The customer had requested a hold during the advertisement due to reorganization & funding. PPMD made the decision to combine all three jobs into one new advertisement.

The project is for Beale AFB, CA & consists of Reserve Security Police Flight, Group Headquarters Building, and Medical Training Facility.

- Solicitation # = DAC05-96-B-0055
- Price Range = $1M - $5M
- Total Drawing Sheets = 246
- Total Technical Specification Sheets = 3025

Procedure

Hardware/Software Used

Existing:

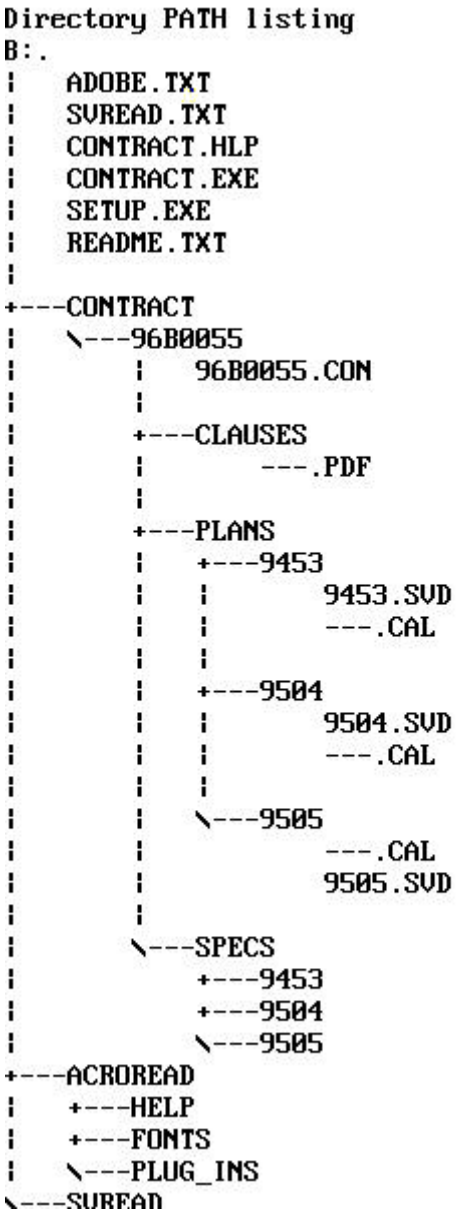
- Intergraph TD-30 workstation and AnaTech Eagle scanner using Intergraph Eagle scanning driver for NT: 300 dpi, scan speed of 60, no warping, saved directly to .CAL file format.
- HP ScanJet Plus desktop scanner for 8.5x11 using OmniPage Pro for Windows and printing to Postscript to File print driver.
- Transferred files using FTP from Piper IPSwitch software through Banyan Vines LAN.

Purchased:

- HP SureStore 4020i CD Writer on 486/66 DELL PC w/ 2 gig hard drive. ($1200)
- Adobe Acrobat Exchange for hotlinking .PDF format specs ($495)
- Adobe Acrobat Distiller for converting postscript format specs to .PDF format (incl w/ Exchange)
- DataWare=s SourceView Author for creating the .SVD control file to index, organize & hotlink .CAL format drawing files ($795)

Structure of CD-ROM

Here is a listing of the directory structure for our public CD. We chose to keep the drawing files, specifications files, and frontend files organized under their own separate directories.



This is to duplicate our in-house structure. Also most users seemed to just start searching through the CD structure instead of selecting the .con file. This structure was used to provide them with at least a sense of assurance on what type of info was provided on the CD.

This particular project was three jobs combined. We decided it was best to keep them separate on the CD. We renamed the drawing .CAL files to be consecutive numbers so that a contractor could keep the files in order if they decided to use a different viewer or plot program than SourceView. The AutoCAD batch plotting program for producing our .CAL files will do this automatically.

Contracting

Info regarding synopsis was transferred via hard copy from Specifications Unit to Contracting. Additional standard Contracting paragraphs regarding subcontracting and payment procedures were input by Contracting. A verification hard copy of the synopsis was forwarded to the Specifications Unit concurrent with transfer to Commerce Business Daily (CBD). This particular synopsis stated

that only CDs would be mailed but hard copy could be picked up at SPK's Plan Room. There was a $20 charge for CDs and $158 for hard copy.

Bidder's info was typed into a PC based database: DATAFLEX. Hard copy of the plan holder's list was sent to Specifications Unit the day before both the hard copy & master CD was to be sent to reproduction. The plan holder's list was included in the frontend of the specifications. There were **39** registered bidders with **14** requesting CDs.

Low bid information and post award information is currently available in hard copy from the Plan Room. Contracting is setting up Web Pages to model Seattle District, which will post these two items. Only two bids were received on this job.

Design

No impact to the designer occurred during the production of the CADD files for the public CD.

Since this was a combination of old jobs, we couldn't be sure of the correctness of the electronic CADD files. The decision was made to scan hard copies. This would also alleviate any signature issues since it was the first CD from SPK. Two of the three separate projects were OK as previously designed and were scanned well in advance by a GS-03 technician. The hard copies were then sent to Reproduction well in advance. The job that had to have changes based on customer comments resulted in a last minute rush job. Scanning was done by a GS-09 technician. He randomly reviewed the drawings using the Zoom feature in the SourceView Reader & found MANY faded out lines that weren't noticeable when viewing the whole page. This stopped our mass production of scanned drawings. Each scanned image was then viewed extensively through ZOOM & also printed to hard copy using an HP Laserjet 5 on 11x17 paper for quality control. Many of the first two jobs had to be rescanned with the threshold parameters changed & scan speed reduced to 60.

During the test CD, production of the .CAL format drawing files directly from AutoCAD created a great impact upon designers: An average of 8 man/hrs for each of the 7 designers for creation of .CAL format files, plus an additional 3 hrs each for installing the driver, overview meetings & training. Each designer also had to be walked through the first few drawings because it was a totally new procedure and each machine was setup differently. Our AutoCAD plotting setup runs through the Intergraph IPLOT Server. Plot files are processed on the local PC before spooling to the Plot Server vs. Microstation transferring the drawing file to the Server first before processing. This caused 486/33 PC users to experience 40 min. processing time per drawing. The process wouldn't work in the background either to allow multitasking. Even some of the Pentium 133Mhz processors experienced a frozen machine after a 20 min. file processing wait. Our individualized training also lacked emphasis on previewing the full .CAL plot file and setting up the plot parameters (like Landscape, paper size, etc.) within SourceView for each drawing. This caused 90% of the files to be incomplete. Also, since the test CD was done on a project that had been designed several years previous, the Pen Tables were not consistent. This resulted in inaccurate line widths and types. Each designer needed to configure the driver to the settings of the drawing.

Specifications

Front-end Specs (Contract Forms & Clauses)

All the contracting forms, clauses, and division 01 specs are prepared and assembled by our

Specifications Unit using WordPerfect. They are positioned in front of the technical specifications (DIV 02-16) and bound as one book.

Hard copies of the forms (such as DD1442) have been scanned as images into WordPerfect and templates and macros are used to fill them out to help eliminate some of the duplicate data entry. All the frontend pages were printed to POSTSCRIPT files and converted to .PDF using Adobe Acrobat Distiller. This provided a faster & cleaner print on the forms than printing directly to .PDF format. Also, printing to postscript eliminated the purchase of the PDF Writer driver for multiple workstations.

Some blank forms and generic details that are sent to contractors (such as test report forms behind 01400, sign details behind 01500, and general vicinity maps) were scanned & converted to .PDF format. These files are located on the LAN for the Specifications Unit to pull into their working project directory when needed. This process simulates current procedure. Hard copies were pulled from file folders and put with specification package just prior to sending to reproduction.

Hotlinking the frontend was done using Adobe Acrobat Exchange. All files were kept as individual files. From the Table of Contents, links were established to all the forms, pricing schedule, wage rates, each div01 section.

Technical Specs

All specifications were printed to POSTSCRIPT files then converted into .PDF format using Adobe Acrobat Distiller. This included specifications created with SPECSINTACT, WordPerfect, and scanned hard copy. Obtaining electronic versions and organizing the specification files was the most difficult and time consuming of all tasks for preparing the public CD. The first task was to get all the filenames for the existing electronic versions into the standard 5 digit CSI numbering scheme so they would fall in order on the CD if someone decided to bypass the programs.

The problem with SPECSINTACT was the filename extensions. 02050.sec for the body of text and then 02050.toc for the table of contents. This puts the table of contents after the text. Also when printing the files to either the POSTSCRIPT driver or ACROBAT PDF WRITER driver, both extension would be replaced with either .PS or .PDF and one file would be lost. We chose to add the letter "a" to the TOC file and the letter "b" to the text body file. 02050a.ps and 02050b.ps.

The problem with some of our WordPerfect files were from users generating the table of contents at the end of the file instead of at the beginning. This was the most difficult because each file had to be opened & the TOC info positioned correctly. This took approximately 10-30 min per file because of formatting differences. A GS-04 clerk accomplished this task in two weeks.

The only problem with hard copy scans was the time to do OCR and proofreading. We decided to take the time for OCR instead of a straight image to make the specifications consistent and allow for text search through the ADOBE reader.

For the public CD, we chose to append all specifications for one division into one file and make bookmarks to each individual section. Each individual spec plus the combined division files were all put on the CD. This allowed the greatest search capabilities without using the expensive Acrobat Search program. The table of contents for the technical specs was hotlinked only to the first file of each Division. The problem with this is that some of the divisions get to be large byte sizes. Also

some users mentioned they didn=t like having to do the two steps necessary to find another specific spec within a different division. The suggestion to us was to hotlink the table of contents to each individual section. Combining the specs by division is OK but majority felt it wasn't necessary. It does take more time & makes some large files.

A problem was encountered when the electrical designer wanted to put some lighting fixture details at the end of 16415. We scanned and saved all the details from Std. 40-06-04 into .PDF format and put them on the LAN. The details were named after their page number in the manual: 16415x1 thru 16415x76. This way they would remain in the correct sequential order on the CD. For this project, the EBS file organizer copied the necessary details from the LAN to the working project directory. In the future this will be the individual designers responsibility.

Publication/Reproduction

Obtaining all the electronic .CAL & .PDF files and organizing them for the CD took approximately 192 man hours.

- 72 man/hrs for scanning & QC on drawing files (scanning = approx. 7 shts/hr, QC = approx the same
- 80 man/hrs for cleaning up old specification files
- 08 man/hrs for creating .SVD, .CON, & readme files
- 24 man/hrs for creating the .PDF format, hotlinking frontend of specifications & creating general info file
- 08 man/hrs for hotlinking drawing files, writing & testing/QC on CD.

For future jobs, we expect the man/hours to drop to 40 or less for production of a project CD. Our new Standard Operating Procedures & use of some AutoCAD Lisp Routines will reduce time for creating .SVD files. Also any new CAD jobs should have no scanning time & will be converted to .CAL format using batch routines & overnight processing. We will be posting this programming onto the EBS Web Pages. We have also written WordPerfect template files to produce the .CON, readme, & many other forms the Specification Unit uses in the frontend.

Reproduction of the CD was done through a local blueprint firm. We had provided them a hard copy of the CD label design which they retyped into a Desktop Publisher. There were typographical errors which caused a rerun of CDs but no delay occurred. The cost to us was $22 per CD and it took 3 days.

We had used DPS on our test CD and the turn around time was two weeks and the cost was $22 per CD. Their equipment also added a new parent directory but it didn't affect the CD operation, just took longer to find the .CON file.

Amendments

One amendment was issued on a 3.5" floppy disk. It contained change pages in .PDF format for four sections of the specifications (approx. 29 pages on 8.5x11). We also provided a readme file to instruct the contractor to startup the Contract Viewer from the CD but then select the amendment .CON file from the disk. The EBS file organizer (Lere Busch for this case but in future will be the Specifications Writer) produced & tested a Master Amendment Floppy which in turn was manually

reproduced by a clerk using DISKCOPY. Disk labels were made thru the WordPerfect label macro on Avery labels. The disks were mailed in Floppy Disk mailers stuffed by the same clerk. The Plan Room attached the mailing labels which were produced thru their DATAFLEX database program.

Our plan is to issue amendments through FAX on four or less 8.5x11 pages; a 3.5" floppy for more than 4 pages up to three floppies full of info; and a new complete package CD for any changes to drawings or requiring more than three floppies. We also have approval from Contracting to post amendments onto Web Pages, an FTP site, and/or a modem accessible Bulletin Board.

Recommendations

1. Negotiating a contract with DataWare for purchasing SourceView Capture Driver (to produce .CAL from within CADD) & the Author program & their other utilities. Even though OnCenter software is free & a good place to start, SourceView has many other useful capabilities like executing other programs from hotlinks, capability of other file formats & fast methods of repeat hotlinking, etc. It can work good for other than EBS applications (as-built packaging, planning & real estate needs)
2. Work with DataWare to further improve the SVCAPT.DRV to allow saving changes to default configuration. Having to change the settings for each plot file allows too much room for error.
3. Approaching AUTODESK to revise the Postscript Driver within AutoCad to process dithering & grey scales correctly. This would save a tremendous amount of time in QC, would better enable contractors to provide us with .CAL format (without purchasing separator drivers), could be easier to implement in each District the overnight batch processing using Ghostscript.
4. Approach Adobe & Microsoft to allow import/export of PDF file formats for easier exchange between customers.
5. Allow the WES EBS Web database to accept transfer of a text file & directly import data instead of Contracting having to retype advertisement info onto the Fill-Out form.
6. The Systems FAC Group from the CADD Workshop in Rock Island expressed heavy interest in upcoming EBS and wants further development on training or the EBS Web Pages to distribute information and/or Q&A.
7. SPK may look into the long term benefits of switching to AutoCad APLOT software to free up processing time on local PCS. However, with our batch process running at night, we don't expect this to be a high priority.
8. Adding Adobe Acrobat Search to each CD would be very helpful, not only to contractors, but to us also for archiving purposes. Their price of $695 per CD title is very unreasonable though. Suggest price negotiations with them or a new universal text viewer be found.
9. We're asking SPECSINTACT to reconsider their filename conventions so when we print to postscript or .PDF the files are not overwritten or lost.
10. Suggest each District have one meeting with invitations to all their Plan Rooms to go over the CD operation and how to get the info to the contractors that use them.
11. We would like access to electronic versions of the details used in all Corps & Tri-Service manuals, both in CADD format & .PDF format. (especially STD No. 40-06-04, Lighting Fixtures Manual)

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Author: Lere Busch Updated 09/12/96

Case Study - NCCOSC San Diego

Background

NCCOSC RDT&E Division Engineering Office in a fiscal year will typically advertise and manage to completion about 200 construction contracts. The bulk of the projects are alterations and repairs with some minor construction that do not exceed $300,000. The Military Construction (MILCON) size projects for San Diego area are managed by Naval Facilities Engineering Command, Southwest Division (NAVFAC).

Organization/Coordination

The team assembled to develop the EBS project consisted of Gene Olaes the Engineer in Charge, Dee Pate the Contract Specialist and Gabriel Haduch for Computer Processes.

Project

The criteria used for selecting the pilot project for EBS was as follows:

1) The project had to be of significant money size, at least $500,000 or above. This was determined by an earlier survey as to the availability of computers hardware and computer knowledge among the construction contracting community around San Diego and vicinity. The survey showed that the bigger size construction contractors had the hardware and in-house knowledge to handle an EBS type project. Also, these contractors expressed an interest in an all electronic type project.

2) The project was not to be designated as a "fast track" project. This was done to ensure minimum impact on base operations and on going projects in case there was a protest.

3) The project had to have the potential for savings when done electronically versus paper. A significant amount of drawings or specifications were required to satisfy this criteria in order to show savings in reproduction cost and mailings.

4) The project was to be designed electronically by the Architectural firm. This was to save time in the creation of the raster image and to preserve the quality of the drawings versus a scanned image.

Project Selection

The pilot project selected for EBS implementation was the Installation of Water Meters, Point Loma Complex (LR170-94). The price range was between $500,000 and $1,000,000.

The work includes installation of water meters, backflow prevention devices and double check valves with hose bibbs at various sites, buildings, and irrigation systems which includes: saw cutting, site demolition, demolition work involving asbestos cement piping, excavation and backfilling, concrete, asphalt concrete paving, exterior water distribution systems, plumbing systems, landscape restoration, topsoil placement, replacement of an existing 225 KVA pad mount transformer with a

225 KVA pad mount substation, underground electrical work, fiber optics data transmission for exterior system, utility control system, and incidental related work, complete and ready for use. The issue date was August 26, 1996 and the bid opening date is September 26, 1996.

Procedure

Pre-Bid Conference

On May 24, 1996 NCCOSC RDT&E division in collaboration with Southwest Division held a pre-bid conference, where construction contractors were invited to view and asses the new technology and procedures for EBS. The conference was sponsored by the Tri-Services and was presented by Ronson Kung. The vision for the future of electronic contracting was presented by Justin Taylor from USACE Headquarters.

Specification Preparation

Originally the specification for the project were prepared using the DOS version of SPECSINTACT by the A&E firm. The specifications were first translated into the windows with SGML version of SPECSINTACT, and than printed to a file using the Adobe Acrobat window printer driver.

Several problems were encountered during this process. The translation from DOS into SGML is not perfect to the point where what you see or print in DOS is not what you get in SGML. Some of the formatting codes were lost or misinterpreted. All of the specs had to be reviewed and manually adjusted and edited to look like the printed version. Some of the specs were so badly formatted that it was easier to export the SPECSINTACT DOS version to an ASCII file and than import into a word processor for formatting. Another problem encountered was the inability to generate a submittal log. The SPECSINTACT program sends printer codes for the selected printer in order to change the margins and fonts for the submittal log printing which are rejected by the Abobe printer driver.

The solution to these problems is to obtain the specifications form the A&E originally in the windows with SGML format, or a windows word processor.

Drawing Preparation

The drawings were done in AutoCAD release 12 by the A&E firm. The drawings were civil type, site drawings with contours and bolded water lines. The contrast between the contour lines, terrain and the work was necessary.

The perennial problem of unrecognizable fonts surfaced. Once the A&E firm was contacted and the proper fonts were installed, the problems to generate CALS files started. Using the Source View windows driver did not have the capability to do dithering. A postscript driver with dithering was added to the AutoCAD program and Postscript files were generated, than Ghostscript was used to create CALS files.

For the next project, it would be prudent to have a Postscript driver with dithering capabilities already installed for AutoCAD, and use Ghostscript to generate CALS files. Also, have the designing A&E firm notice of the intended use of the drawings, that the product will be the electronic files not the paper drawings.

File Naming Convention

The specifications were individually created by sections but assembled into division files. The drawings files were names as sequential EDN (Engineering Drawing Numbers) for the Engineering Office benefit.

Publication/Reproduction

CD-ROM

A single master CD-ROM was created and turned over to the Defense Printing Services for reproduction of 250 copies. The job was solicited and competitively bid by several companies.

Unfortunately, three files from the master CD-ROM were not reproduced correctly; they were unreadable. Since the files did not constitute a vital part of the contract, they were instructional files, the CD-ROM was issued to the contractors.

Good advice would be to have a review of the master produced by the reproduction company before mass production. Also, allow enough time to redo the job if is not done properly the first time.

Recommendations

It is apparent that the best approach to an EBS project is to have the designing A&E firm as part of the EBS team. This would have to be spelled out in the A&E job request. Maybe at a later date request that the job be delivered in the electronic forms needed for EBS.

The EBS team should develop a standard file naming for the specifications, drawings, and job index in order to aid the contractors. Also, a directory naming convention should be implemented for all CD-ROM=s.

The EBS team should developments auto-printing routines for generating CALS drawings in order to speed the development time.

Review and standardize the readme file included on the CD-ROM. Each district/division developed their own readme file.

Current Status

The bid opening date for the EBS project is 26 September. The survey form was include on the CD-ROM and will by received at the bid opening date. A follow-up to this report will develop.

[Back]
Author: Gabriel Haduch
Updated 09/04/96

On-Line Resources

Appendix B - On-Line Resources

Miscellaneous Sites
http://procure.msfc.nasa.gov/nasaproc.html NASA Procurement Home Page
http://procure.msfc.nasa.gov/fedproc/home.html Federal Acquisition Jumpstation
http://www.safaq.hq.af.mil/ Air Force Contracting Home Page
http://www.abuildnet.com BuildNET
http://cos.gdb.org/repos/cbd/cbd-intro.html CBD - Commerce Business Daily
http://www.gsa.gov/far Federal Acquisition Regulations
http://farsite.hill.af.mil FAR and CBD files
http://acqnet.sarda.army.mil Army Acquisition Website

Readers
http://www.adobe.com/prodindex/acrobat/readstep.html Adobe Acrobat Reader Software
http://www.whidbey.net/~dataware/ SourceView Reader
http://tsn.wes.army.mil/ebsfiles/viewers/contract.exe Contract Viewer by Ronson Kung

CALS Viewers / Takeoff Software
ON-Screen Takeoff v1.30 by ON-Center is a royalty-free raster viewer capable of viewing .OST files (Similar to .SVD files), CALS group 4 and TIFF raster files. You can associate this software with your web browser and view .CAL files transferred through the Internet. Download the
http://tsn.wes.army.mil/ebsfiles/viewers/ost16ins.exe 16-bit version for Windows 3.1x or the
http://tsn.wes.army.mil/ebsfiles/viewers/ost32ins.exe 32-bit version for Windows '95 and NT systems. Contact On-Center at (800) 880-8254

http://tsn.wes.army.mil/ebsfiles/viewers/bidview.zip Bid View v1.0by Sierra Network System is a demonstration CAL and TIFF raster viewer capable of onscreen takeoffs. This viewer contains exactly the same features as the licensed version, except the capability to print/plot, import spreadsheet template forms, export takeoff quantities to another application and save takeoff (tko) files
have been disabled. This software works with Windows 3.1x, WIN95 and WINNT systems. Online registration and full activation of the software is available from any of Sierra's Bid View Electronic Plan Room services or by calling 303-455-2081.

http://www.compumedia.com/~dataware/ SourceView Reader by Dataware Electronics is a CALS and TIFF raster viewer that requires an associated .SVD file for viewing. The free reader cannot open native CALS or TIFF files and requires you to open a .SVD file. This free reader is also included in the purchase of SourceView Author and can be distributed free of charge. The software works with Windows 3.1x, WIN95 and WINNT systems. Contact Dataware Electronics at (206) 258-3032.

Acrobat Related Files
http://tsn.wes.army.mil/ebsFiles/viewers/acrobat/adobe.txt Adobe Help File by Ft. Worth USACE
http://tsn.wes.army.mil/ebsFiles/viewers/acrobld/abuild.exe Acrobuild by Drew Anderson of Omaha USACE Compiles a Table of Contents for Adobe Acrobat from a text file. Written in Visual Basic.
http://tsn.wes.army.mil/ebsFiles/viewers/check/acrochk.exe Acrochk by Drew Anderson of Omaha USACE. Tells you if there are PDF files in your TOC file that do not exist.

SourceView Related Files
http://tsn.wes.army.mil/ebsFiles/viewers/sv/svread.txt SourceView Help File by Ft. Worth USACE
http://tsn.wes.army.mil/ebsFiles/viewers/check/svdchk.exe Svdchk by Drew Anderson of Omaha USACE Tells you if there are CAL files in your TOC file that do not exist.

Forms
http://tsn.wes.army.mil/ebsFiles/forms/4288/eng4288.zip Eng 4288 MS-Access Zip file by Omaha USACE

http://tsn.wes.army.mil/ebsFiles/forms/forms.zip USACEFormFlow Files in a Zip file by Mobile **USACEPDF Solicitation Forms**
http://www.adobe.com/Acrobat/Acrobat0.html Adobe Acrobat Reader is required to view specifications and contract forms. It is available for Windows 3.1x, WIN95, WINNT, Unix, and MacIntosh systems.

http://tsn.wes.army.mil/ebsfiles/forms/sf24.pdf SF-24
Bid Bond (compliments of Ed Hiles from USACE Mobile District)
http://tsn.wes.army.mil/ebsfiles/forms/sf25a.pdf SF-25A
Payment Bond (compliments of Chuck Gregory from USACE HQ)
http://tsn.wes.army.mil/ebsfiles/forms/sf25b.pdf SF-25B
Continuation Sheet for SF-24, 25, 25A (compliments of Chuck Gregory from USACE HQ)
http://tsn.wes.army.mil/ebsfiles/forms/sf_lll.pdf SF-LLL
Disclosure of LobbyingActivites (compliments of Ed Hiles from USACE Mobile District)

FormFlow/PerformPro Forms
http://tsn.wes.army.mil/ebsfiles/forms/sf24.frp SF-24 Bid Bond
http://tsn.wes.army.mil/ebsfiles/forms/sf28.frp SF-28 Affidavit of Individual Surety
http://tsn.wes.army.mil/ebsfiles/forms/sf030.frl SF-030 or
http://tsn.wes.army.mil/ebsfiles/forms/sf30.frz SF-30 Amendment of Solicitation Modification of Contract
http://tsn.wes.army.mil/ebsfiles/forms/sf1417.frp SF-1417 Pre-Solicitation Notice
http://tsn.wes.army.mil/ebsfiles/forms/sf1442.frp SF-1442 Solicitation, Offer, and Award
http://tsn.wes.army.mil/ebsfiles/forms/sf-lll.frp SF-LLL Disclosure of Lobbying Activities
http://tsn.wes.army.mil/ebsfiles/forms/8aadvnot.frp 8A Advance Notice
http://tsn.wes.army.mil/ebsfiles/forms/e4025-r.frp E4025-R Transmittal of Shop Drawings, Equipment Data, Material Samples, or Manufacturer's Certificates of Compliance
http://tsn.wes.army.mil/ebsfiles/forms/e4288-r.frp E4288-R Submittal Register
http://tsn.wes.army.mil/ebsfiles/forms/M1151.frp M1151 Prompt Payment Certification and Supporting Data for Contractor Progress Payment Invoice
http://tsn.wes.army.mil/ebsfiles/forms/M696.frp M696 Contractor Quality Control Report (QCR)
http://tsn.wes.army.mil/ebsfiles/forms/fabguide.frp Fabrication and Mounting Guidelines

Web
http://tsn.wes.army.mil/ebsFiles/web/vbweb.zip VB Contract Web Site by Drew Anderson of Omaha USACE
http://tsn.wes.army.mil/ebsFiles/web/cf.zip COLD FUSION Contract Web Site by Matt Hale and Jeff Egan CADD/GIS Center

Details
http://www.sam.usace.army.mil/sam/en/guides/400604.htm Lighting Details in WP by Ed Hiles of Mobile USACE

Publications
http://www.usace.army.mil/inet/usace-docs/ USACE Publications by HQ USACE

Correspondence

CEIM-I

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, DC 20314-1000

EC 25-1-252

Circular
No. 25-1-252

31 March 1997

Expires 31 March 1998
Information Management
Transfer and Interchange Formats for Electronic Documents

1. Purpose. To implement policy for the use of a standard transfer and interchange format for final and/or authenticated documents.

2. Applicability. This circular is applicable to all HQUSACE/OCE elements and all USACE Commands.

3. References.

a. DoD Joint Technical Architecture (JTA), Version 1.0, 22 Aug 96.

b. Department of Army Technical Architecture (ATA), Version 4.5, 12 Nov 96.

c. OSD Continuous Acquisition and Life-Cycle Support; Specifications and Standards; MIL-PRF-28002B: Raster Graphics Representation in Binary Format; Rev. 14 Dec 92.

d. Engineer Circular 25-1-231, Information Management: Use of the Internet, 22 Mar 96.

4. Background.

a. Documents (see definition in appendix A) are created using many different software application programs. Each software application will have its own unique file format and version level which makes sharing the document difficult unless the receiver and sender have the same software program.

b. To insure the successful electronic transfer and interchange of final and or authenticated documents, it is necessary that USACE adopt a common file format which will eliminate file format incompatibility.

c. The use of a common document transfer and interchange format provides many benefits to document originators and users, such as providing:

(1) ability to transfer documents electronically as attachments to E-Mail, postings on the INTERNET or files on a CD-ROM.

(2) ability to read, print, conduct key word search, and clip text and graphics to Windows clipboard from document file.

(3) ability to access files in the transfer format with a single software application reader.

(4) ability to provide document uniformity, integrity, accuracy and authenticity.

(5) ability to transfer documents across a variety of operating systems (any Windows, Macintosh and Unix based system).

(6) ability to transfer compound documents (documents containing embedded graphics, tables, and formatted text).

5. Policy. It is the policy of the Corps that:

a. The Portable Document Format (PDF) will be used at all Corps organizational levels for the electronic interchange of final and/or authenticated non raster based documents within the Command when the primary purpose is for viewing or reference. Final and or authenticated documents can include products such as, but not limited to, official correspondence, memorandums, policies and directives, reports, specifications, miscellaneous publications, briefings, speeches, computer graphic presentations, scanned print media, electronic bid sets.

b. The Continuous Acquisition and Life-Cycle Support (CALS) Format will be used at all Corps organizational levels for the electronic interchange of final and/or authenticated raster-based images associated with technical drawings required for project design and construction, such as computer-aided design(CAD) engineering drawings which are included in bid sets.

c. PDF and CALS document interchange formats will be used for final and/or authenticated electronic document interchange through all electronic mediums, i.e., E-mail, CD-ROM, floppy disk, removable media of any type, etc.

d. PDF and CALS may be used, as appropriate, and such use is encouraged at all Corps organizational levels, for the electronic interchange of final and/or authenticated documents with external sources, i.e., other Department of Defense partners, Corps customers, etc.

e. Copyrighted material and material with information security sensitivity, which are converted either to PDF or CALS interchange format, will be accorded the same protection and rights of use as the record copy.

f. PDF and CALS document interchange formats are generally not used, nor recommended, for work-in-progress or application files such as databases, electronic fillable forms, CADD drawings and image files which must retain application functionality.

g. PDF or CALS document interchange formats will not be used as a substitution for the record copy required to be retained in original format for archival or record keeping purposes.

h. This policy does not preclude the use of Standard Generalized Markup Language (SGML) or HyperText Markup Language (HTML) as an appropriate interchange format for documents which are targeted for publication on the World Wide Web (WWW).

5. Responsibilities.

a. The HQUSACE Director of Information Management will:

(1) Establish, and periodically revise, the Command document interchange format policies as appropriate.

(2) Review compliance with the PDF/CALS interchange format policy at all levels of the command through the Information Resources Management Review and Oversight Program (IRMROP).

(3) Support acquisition, distribution, and maintenance of commercial-off-the-shelf (COTS) software targeted for implementing the Command PDF electronic document interchange policy.

b. Commanders at all organizational levels will:

(1) Ensure compliance in every business process area with the established Command standards for final and/or authenticated electronic document interchange requirements.

(2) Ensure that training opportunities are provided to team members who have responsibilities for final and/or authenticated electronic document dissemination.

(3) Ensure notification of the appropriate labor organization (s) that hold exclusive recognition to represent bargaining unit employees that may be impacted by this policy.

c. Proponents/authors/action officers of final and/or authenticated electronic documents will:

(1) Convert outgoing documents/information products to PDF or CALS as specified by this policy.

(2) Review to ensure accuracy and integrity of content of the converted document to the original information product.

(3) Maintain official record copy for all information products transferred to PDF or CALS which are to be managed as official records of the organization.

FOR THE COMMANDER:

OTIS WILLIAMS
Colonel, Corps of Engineers
Chief of Staff

[redacted]

Transfer Formats - File formats used in the process of exchanging, moving, passing, conveying electronic documents to another user.

T:\COORD.DOC\EC251252.WPD

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

CEMP-EC

16 January 1997

MEMORANDUM FOR COMMANDERS, MAJOR SUBORDINATE COMMANDS

SUBJECT: Electronic Bid Sets (EBS) Training

1. The primary objectives of the Electronic Bid Sets (EBS) program are to develop the process, procedures and guidance to effectively replace the printed media for construction contract solicitation documents with an electronic bid package. The EBS consists of the distribution of contract documents, technical specifications and drawings on a compact disk (CD-ROM). The solicitation CD-ROM utilizes royalty-free viewing software and requires only a Windows based operating system. The use of the Internet allows prospective bidders to view, search and download project solicitation documents and order the CD-ROM for that solicitation. The CD-ROM will be considered as the official issuance of solicitation documents.

2. A partnering effort between CEMP, CEIM, and the Tri-Services CADD/GIS Technology Center has resulted in the success of several pilot projects and indicated significant saving. Corps-wide utilization of the EBS will produce large savings in natural resources and manpower. The use of EBS for the pilot projects has saved the printing of over 1,805,850 pages of documents. A stack of paper containing those pages would be almost 602 feet tall, or 47 feet higher than the Washington Monument and weigh over 9 tons.

3. The vision of this project is to migrate toward electronic bid documents incrementally but aggressively. To begin this progress each district or installation is requested to assemble and provide for training, an EBS team. This initial team should include team members from the Engineering, Information Management, Contracting, and Program/Project Management Divisions. A course is now being offered through the aegis of the Tri-Service CADD/GIS Technology Center to provide training on the preparation, operation and maintenance of EBS.

4. The training course will include lectures, presentations and hands-on exercises to guide students through the EBS process. Training on the use of the Adobe' Acrobat 3.0 and Dataware SourceView software for capturing and viewing documents will also be included. Training will be taught in four separate sessions on the dates indicated on the enclosed memorandum from the Tri-Services CADD/GIS Technology Center .

5. The HQUSACE is excited about this effort and its potential for improving construction contract bid document quality, attendant time and cost savings. Each Commander should identify design projects which would be appropriate for local EBS application and support development of an EBS team.

CEMP-EC
SUBJECT: Electronic Bid Sets (EBS) Training

6. The HQUSACE Points of Contract or POCs for this initiative are Justin Taylor/CEMP-EC/(202)761-1246 and Charles Gregory/CEIM-IV/(202)761-1813. If you have any technical questions about the course, please contact Mr. Matt Hale at (601) 634-3509 or Mr. Elias Arredondo at (601) 634-3140.

FOR THE COMMANDER:

KISUK CHEUNG, P.E.
Chief, Engineering Division
Directorate of Military Programs

STEVEN L. STOCKTON, P.E.
Chief, Engineering Division
Directorate of Civil Works

DONALD J. WHITTEN
Colonel, Corps of Engineers
Director of Information Management

THOMAS J. QUIGLEY
for Colonel, Corps of Engineers
Acting, Principal Assistant
Responsible for Contracting

Encl

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

CEIM-ZA (25-1) 14 JAN 97

MEMORANDUM FOR Commander/Directors, Major Subordinate Commands, Labs and Field Operating Activities, HQUSACE, Directors and Chiefs of Information Management

SUBJECT: Adobe Systems Software

1. Reference CEIM-IV MEMORANDUM, DATED: 7 JAN 97, SUBJECT: Software and Support Services for Electronic Document Interchange Format

2. Enclosed you will find copies of Adobe System software which are being provided to you for use in support of the new USACE Interchange Formats referenced in the Draft Engineer Policy EC 25-1-252, Contract #DACA72-96-D-0003. Final and/or Authenticated Electronic Document Interchange Format: **http://www.usace.army.mil/inet/functions/im/ceimp/ipm.html#EC251252**

3. The utilization of this software in the preparation of final and or authenticated command documents to the Portable Document Format (PDF) , will ensure that document users have the ability to read, print, word search, and cut and paste text and graphics. Conversion of documents to PFD file format will also ensure the protection of the document from change.

4. When distributing this software, it is recommended that priority be given to staff members who are involved in preparation of Electronic Bid Sets. Team members who prepare Official Command Directives and Correspondence, Electronic Slide Presentations, and other final and/or authenticated documents which are being distributed for information on the INTERNET or by CD-ROM or other electronic media should also be high priority candidates for receipt of this software.

5. Additional software and training is available under Government Contract #DACA72-96-D-0003, CTM Automated Systems, INC. The USACE designated point of contact for coordination of all acquisitions through this contract is James Otto, HQUSACE - CEIM-IV, 202-761-1291.

6. If you have any question with regard to the Electronic Document Interchange Format or the distribution of this Adobe Software, please call Charles A. Gregory, CEIM-IV, (202) 761-1813.

FOR THE COMMANDER:

Donald J. Whitten

DONALD J. WHITTEN
Colonel, Corps of Engineers
Director of Information Management

DEPARTMENT OF THE ARMY
WATERWAYS EXPERIMENT STATION, CORPS OF ENGINEERS
3909 HALLS FERRY ROAD
VICKSBURG, MISSISSIPPI 39180-6199

REPLY TO
ATTENTION OF

CEWES-ID-C

18 December 1996

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Training Course on Electronic Bid Solicitation (EBS)

1. The Tri-Service CADD/GIS Technology Center has developed guidelines, formats, procedures, and workflows to enable districts and installations to announce solicitations electronically via the Internet and CDROM. Prototype implementations have been conducted at the US Army Corps of Engineers and Navy sites over the past year, which have shown significant cost savings. The Center has set up a server for this purpose with lessons learned and typical solicitations which can be used by the implementor and reached at "http://tsn.wes.army.mil." As part of the FY97 project on EBS, a training course is being offered through the Center to provide the student with information on how to set up, operate, and maintain an EBS.

2. The training course will include lectures, presentations and hands-on exercises to guide students through the EBS process. It is recommended that each district or installation train individuals from the Information Management, Contracting, Engineering, and Program/Project Management Divisions. The training will be taught in four sessions on the dates shown below and will be held at the Tri-Service CADD/GIS Technology Center located in the Information Technology Laboratory at the USAE Waterways Experiment Station in Vicksburg, Mississippi.

1st Session:	25-28 February 1997
2nd Session:	18-21 March 1997
3rd Session:	1-4 April 1997
4th Session:	15-18 April 1997

The cost is $850 per student. Registration is available on a first-come, first-served basis for the tri-services, federal, and contractor communities.

3. The Tri-Service Center must receive an approved DD Form 1556 to cover the cost of attendance no later than:

10 February 1997	for 1st Session
3 March 1997	for 2nd Session
17 March 1997	for 3rd Session
31 March 1997	for 4th Session

Acceptance for the limited number of available spaces will be based upon the date and time of receipt of the DD Form 1556. If an approved DD Form 1556 is received by FAX prior to receiving it through the mail, the time and date on the FAX will be used to determine acceptance. Non-government employees working as contractors for the Government may attend the course, if the Government agency they work for issues a MIPR for the tuition to the Tri-Service Center on their behalf. Commercial parties may attend the course on a space-available basis only. Payment from commercial parties will be in the form of a check payable to the U.S. Treasury Department, but mail to the Center. Government agencies and commercial parties should contact the Center for details. The address of the Center is:

4. Due to the limited number of workstations available for this training, the following plan will be followed. An accepted DD Form 1556 will be considered as a firm commitment on the part of the Center to reserve a space for participation in the training course and a commitment on the part of the student to attend. Charges will be incurred whether or not the student attends. Additional sessions at the Center or remote sites may be provided, if the need is present.

5. Blocks of rooms have been established for each session as shown below. Please make your reservations directly with the hotel by the cutoff date. Mention the reservation code when calling the hotel.. The rate, including tax, is within perdiem. We are also enclosing a list of hotels for your convenience (encl 1) if you should want to select a different place. If you have any technical questions, please contact Mr. Matt Hale at (601) 634-3509 or Mr. Elias Arredondo at (601) 634-3140. Administrative questions and registration should be addressed to the Center at (601) 634-4582 or via fax (601) 634-4584.

Session Date	Hotel	Phone No.	Cutoff Date	Rate	Code
25-28 Feb 97	Days Inn Rainbow	601-638-7111	10 Feb 97	$46 + Tax	COR1 Corps of Engineers Electronic Bid Set
18-21 Mar 97	Days Inn Rainbow	601-638-7111	5 Mar 97	$46 + Tax	COR2
1-4 Apr 97	Days Inn Rainbow	601-638-7111	17 Mar 97	$46 + Tax	COR3
15-18 Apr 97	Days Inn Rainbow	601-638-7111	2 Apr 97	$46 + Tax	COR4

Harold L. Smith

HAROLD L. SMITH
Acting Chief, Tri-Service CADD/GIS
Technology Center

[redacted]

...will award and administer the construction contract.

3. At the conclusion of the bid process for each of the five pilot projects, the EBS methodology and prototype will be evaluated, a lessons learned document prepared, and further technology improvements considered. Individual pilot project results will be distributed to all Corps commands as they become available. When all five pilot projects have been bid, lessons learned will be consolidated, and HQUSACE policy and procedures for the EBS initiative will be issued.

4. HQUSACE is excited about the EBS initiative and its potential for improving construction contract bid document quality, and attendant time and cost efficiencies. Each Commander should stay apprised of this initiative and begin to identify design projects which would be appropriate for local EBS application. As we near the completion of this initiative in the next six or nine months, we will be soliciting the name(s) of your EBS project nominees.

(202) 761-1495. The HQUSACE Information Management POC for this initiative is Charles Gregory/CEIM-IV/(202) 761-1813.

FOR THE COMMANDER:

STANLEY G. GENEGA
Major General, USA
Director of Civil Works

ALBERT J. GENETTI, JR.
Major General, USA
Director of Military Programs

CF:
District Commanders

[redacted]

[Return to EBS Home Page]

GAO Decision

NuWestern USA Constructors, Inc., B-275514, February 27, 1997

Matter of:NuWestern USA Constructors, Inc.

File:B-275514

Date:February 27, 1997

Thomas M. Sullivan, Jr., Esq., for the protester. Albert C. Proctor, Esq., and Barbara Bear, Esq., Department of the Army, for the agency. Paula A. Williams, Esq., and John Van Schaik, Esq., Office of the General Counsel, GAO, participated in the preparation of the decision.

DIGEST

Agency's issuance of solicitation only in electronic format (CD-ROM) is not unduly restrictive of competition or otherwiseinconsistent with applicable law and regulation; nothing in the regulations requires issuance of paper solicitations.

DECISION

NuWestern USA Constructors, Inc. (NuWestern) protests the decision of the Department of the Army, Army Corps of Engineers Fort Worth District, to issue request for proposals (RFP) No. DACA63-97-R-0004, to design and construct a warehouse, only in electronic format. NuWestern, a small business, argues that issuance of the solicitation in electronic format only, rather than in addition to paper copies, is unduly restrictive of competition.

We deny the protest.

Prior to issuing the RFP, the Corps participated in a study to determine the feasibility of producing and distributing solicitation documents in electronic format. Representatives from the Air Force, Army, and Navy were asked to develop a process for issuing electronic solicitation packages. To that end, five pilot projects were identified and the electronic format for the distribution of the plans and specifications was initiated. The cost savings for these five projects were significant and, in the judgment of the study group, the use of electronic format to distribute solicitations represented an effective way to reduce the government's cost of operation without restricting competition or imposing a financial hardship on potential bidders or offerors. As a result of its participation in the study, the Corps decided to issue this solicitation only in electronic format, with proposals to be submitted on paper.\1

A *Commerce Business Daily* (CBD) synopsis indicated that the agency intended to issue the solicitation only on CD-ROM; amendments would be issued on floppy disks, CD-ROM, or the Internet. The synopsis further advised that paper copies of the plans and specifications would not be provided and that firms should check the agency's internet address daily for changes to the solicitation.\2 The solicitation was sent on CD-ROM to 63 firms, including the protester. Of the 63 firms that expressed interest in the procurement, the agency reports that 41 are small businesses, six are small disadvantaged businesses, and two are small disadvantaged, woman-owned businesses.

NuWestern argues that use of the electronic format limits competition to those firms that possess the technology required to print the solicitation plans and specifications from the CD-ROM or that have the financial resources to pay a third party for the printing. By not printing the solicitation itself, the protester alleges, the agency unduly restricts competition because it places an undue financial burden on NuWestern and other small businesses and improperly shifts the responsibility for adequacy, completeness and accuracy of the solicitation from the government to potential offerors.

The Competition in Contracting Act of 1984 (CICA) requires contracting agencies to obtain full and open competition, and this is accomplished only where all qualified firms are allowed and encouraged to submit offers on federal procurements and a sufficient number of offers is received to ensure that the government's needs are met at the lowest possible cost. 10 U.S.C. § 2304(a)(1)(A) (1994); *Gutter Lumber Prods.*, B-262223.2, Feb. 9, 1996, 96-1 CPD ¶ 57. Further, the Small Business Act, as amended, 15 U.S.C. § 637b (1994), requires that procuring agencies provide a copy of a solicitation to any small business concern upon request. These statutes contemplate that interested responsible sources will be given a copy of solicitation and the opportunity to compete, and thus do not permit an agency to act in a way that has the effect of unreasonably excluding a concern from competing for an award. *Techniarts Eng'g*, B-235994, Sept. 28, 1989, 89-2 CPD ¶ 293.

Federal agencies have traditionally issued their solicitations on paper and furnished paper copies to interested vendors, who then responded with paper proposals. With advances in the information technology field, however, agencies have found that the use of an electronic format, in place of a paper format, can be more efficient and economical. For example, submission of quotation prices on a floppy disk was required in *Latins American, Inc.*, 71 Comp. Gen. 436 (1992), 92-1 CPD ¶ 519, cost spreadsheets were required on disk in *D.O.N. Protective Servs., Inc.*, B-249066, Oct. 23, 1992, 92-2 CPD ¶ 277, and complete cost proposals on a disk were required in *W.B. Jolley*, 68 Comp. Gen. 443 (1989), 89-1 CPD ¶ 512. Further, in both *Continental Airlines, Inc.*, B-258271, B-258271.4, July 31, 1995, 97-1 CPD ¶, and *Spectronics Corp.*, B-260924, July 27, 1995, 95-2 CPD ¶ 47, the agency furnished offerors with certain solicitation-related information on a computer disk, while in *Arcy Mfg. Co., Inc., et al.*, B-261538 *et al.*, Aug. 14, 1995, 95-2 CPD ¶ 283, the agency conducted entire procurements electronically, posting solicitations on its electronic bulletin board and requiring electronic responses only. Moreover, with the enactment of the Federal Acquisition Streamlining Act of 1994, which called for the development and utilization of a federal acquisition computer network, 41 U.S.C. § 426 (1994), Congress clearly signaled its desire that agencies use electronic acquisition methods.

The agency's use of the CD-ROM format here is entirely consistent with this recent history and, from the facts of record, is not unduly restrictive or otherwise inconsistent with the full and open competition standard. Although NuWestern maintains that CICA and the Small Business Act require agencies to provide paper copies of solicitation documents on request, the protester cites no provision of either of those statutes for that proposition,[3] and we are aware of no specific requirement that the agency provide paper copies of the solicitation. Moreover, as noted above, 63 firms, including 41 small businesses, responded to the CBD notice and were provided an official copy of the solicitation on CD-ROM. Thus, the record supports the agency's position that vendors, including small businesses, can compete here. NuWestern and other prospective offerors can print the solicitation with their own equipment or have another company print it from the CD-ROM; we are not persuaded that either method, requiring access to computerized CD-ROM printing equipment or the incurring of a charge for printing, is unduly burdensome. *See generally Arcy Mfg. Co., Inc. et al., supra* (a requirement that responses to small purchase solicitations be submitted electronically was reasonable and not overly burdensome to prospective vendors); *W.B. Jolley*, *supra* (requirement to furnish cost proposals on disk not unduly

burdensome); and FAR § 5.102(a)(6) (allowing agencies to impose a reasonable fee for solicitation documents). In this regard, as noted above, the agency has publicized the names of firms that can provide the printing services, and the agency reports that these firms have quoted printing prices ranging from $22.97 to $29.74 for printing this solicitation, less than the $34 the agency would have charged offerors for an RFP paper package. We also find no merit to the protester's contention that the agency has shifted responsibility for the accuracy and completeness of the solicitation to prospective offerors by requiring them to obtain their own paper copies of the solicitation. The CD-ROM contains the official copy of the solicitation plans and specifications, and as the agency concedes, the government is responsible for the accuracy, completeness, and content of the solicitation issued by CD-ROM and for all amendments issued by CD-ROM, floppy disk, or by facsimile. In short, the manner in which the agency issues a solicitation--electronic or paper format--is not material to the government's obligation to issue accurate and complete solicitations.

The protest is denied.

Comptroller General of the United States

NOTES

\1 The agency makes available on the Internet a list of firms that will print solicitations from CD-ROM and the Internet.
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\2 Although firms can download or view the solicitation on the Internet, the official copy of the solicitation is provided on CD-ROM.
[Back]

\3 Although the protester also argues that various provisions of the Federal Acquisition Regulation (FAR) require agencies to provide paper solicitations, we have reviewed the cited FAR provisions, and we conclude that they include no such requirement. For instance, NuWestern notes that FAR § 11.201 states that contracting officers do not have to provide certain types of specifications "except when . . . . [a] prospective contractor requests a copy . . . ." Although NuWestern argues that this provision requires agencies to provide paper solicitations upon request, we do not see why an electronic copy would not satisfy the requirement.
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Acronyms

Acronymns

ASCII	American Standard Code for Information Interchange
BLD	File that is used for combining PDF files
CALS	Continuous Acquisition and Life-Cycle Support
CBD	Commerce Business Daily
CEFMS	Corps of Engineers Financial Management System
CGI	Common Gateway Interface
MSDOS	Microsoft Disk Operating System
EBS	Electronic Bid Set
ECBMS	Electronic Contract Bid Management System
EDI	Electronic Data Interchange
IFB	Invitation for Bids
GB	Gigabyte - 1,000MB
KB	Kilobyte - 1024 bytes
MB	Megabyte - 1,000KB
NT	New Technology (Microsoft Windows NT)
PDF	Portable Document Format
RAM	Random Access Memory
SAACONS	Standard Army Automated Contracting System
SI	SpecsIntact
SVD	Source View Document
TXT	ASCII text file
VB	Microsoft Visual Basic
RFP	Request for Proposals
CD-ROM	Compact Disk - Read Only Memory
PO	Purchase Order
IDQC	Indefinite Delivery Quantity Contract

Standard Operating Procedures

Biographical Sketches

Biographical Sketch

Sharron B. Hudson

Ms. Hudson is a Specification Coordinator with the U.S. Army Corps Engineers in Mobile, Alabama. Ms. Hudson has been with the U.S. Government since July of 1981. She has been employed with the Corps of Engineers since June of 1992.

Ms. Hudson currently holds the responsibility of processing all EBS sets for the Mobile District. She provides technical support to engineers, architects and AE firms in the Mobile District to accomplish the mission of project advertising and awards. Ms. Hudson prepares all final documents for EBS solicitations and CD-ROM advertising. This includes advertising, amendments and archiving of all projects. She works closely with the Contracting Division as well as other Districts in the EBS advertising process.

Telephone Number:
FAX:
E-Mail: sharron.b.hudson@sam.usace.army.mil

Drew L Anderson

Mr. Anderson is an Electrical Engineer with the U.S. Army Corps of Engineers in Omaha, NE. Mr. Anderson has been with the U.S. Government since June of 1986. He has been employed with the Corps of Engineers since April of 1988.

Mr. Anderson primary goal in Engineering Division is to automate process performed by engineers and clerical staff. He manages Engineering's 500 node network, provides technical support for hardware and software, creates software for inhouse use, and operates Engineering's Web Site. Mr. Anderson has been on the Electronic Bid Set committee when it started in May of 1995. He has developed several procedures and programs in support of the EBS and is currently working on exploring uses a web site can provide to District personnel.

Telephone Number: 402-221-4454
FAX: 402-221-3842
E-Mail: drew.l.anderson@mro01.usace.army.mil

Biographical Sketch

Edward C. Hiles

Mr. Hiles is a Cadd/System Administrator for Engineering Division in Mobile District. He has been employed with the Corps of Engineers since September of 1985.

Mr. Hiles primary Goal in Engineering Division is to automate process performed by Engineers/Architects and Clerical staff. He manages Engineer's 300 node network, provides technical support for hardware and software. Mr. Hiles has been on the Electronic Bid Set Committee when it started in May of 1995. He has developed procedures on batch plotting using the Cadd software, in support of the EBS.

Telephone Number: 334-690-2639
FAX: 334-690-2424
E-Mail: ed.c.hiles@sam.usace.army.mil

James Justin Taylor

Mr. Taylor is a Program Manager in Engineering Division, Headquarters, U.S. Army Corps of Engineers, Washington, D.C. He is currently the HQUSACE Program Manager for the Electronic Bid Sets Project, the Automated Review Management System (ARMS) and provides technical advice and management for Computer Aided Engineering programs and applications.

Mr. Taylor has held various engineering positions within the Corps. Prior to coming to HQUSACE, he was the project manager for the Automated Review Management System at the ARMS TCX (Technical Center of Expertise) at the Sacramento District, CA. From 1983 to 1988, he was a structural engineer in Design Branch, Engineering Division, USACE Omaha District, NE. He was responsible for the structural design of projects ranging from enlisted and officer housing, administrative and dining facilities to flight simulators and aircraft hangars. In 1988, he was assigned to the Design Quality Assurance Section, Engineering Division, USACE Sacramento District, CA. He was responsible for project compliance on in-house and Architect-Engineer designed projects. He moved to the ARMS TCX where he provided project management for the development, training and implementation of the Automated Review Management System.

He earned a B.S. degree in Architectural Engineering from Tennessee State University, Nashville, TN.

James Justin Taylor
HQUSACE/CEMP-EC
202/761-1246

Mr. James (Jim) Mckenzie

Mr. James (Jim) Mckenzie is the CADD Systems Administrator in the Engineering Support Branch, Engineering & Construction Division of the U.S. Army Corps of Engineers, Fort Worth District.

He graduated from The University of Texas at Arlington in 1983 with a B.S in Civil Engineering. Jim has worked in the Fort Worth District since graduating. He worked in the Site Development Section, Engineering as a Civil/Site Designer for 9 years from 1983 until 1992. Since 1992 he has served as the CADD System Administrator for the Fort Worth District.

Denver Heath

Denver Heath is a contract specialist for the Fort Worth District US Army Corps of Engineers. He has been in Contracting Division for 3 1/2 years where he is responsible for negotiated acquisitions and implementing the latest technology for procurement procedures. He has a B.S. degree in education from Tarleton State University.

Cindy Siford

Work Experience:

Cindy is contract specialist with the Omaha District Corps of Engineers. Cindy has worked in Operations Division, Specifications Section of Engineering Division, and currently works in Contracting Division. She has 15 years of Government Service.

Cindy has been involved in the Electronic Bid Set project since February 1996.

Cindy also substitute taught at various grade levels after she graduated from college. Her teaching experience was concentrated in grades 4 through 6.

Educational Background:

Cindy has a Bachelor of Arts Degree in Elementary Education from Buena Vista University in Storm Lake, Iowa.

Other training received: CEFMS train-the-trainer training; HTML levels I and II; and LEAD training.

Personal Background:

Cindy lives in Carter Lake, Iowa. Carter Lake is an Iowa town that is located on the Nebraska side of the Missouri River. She has two children, Kelli is 16 and a sophomore in high school. Danny is 13 and is in the seventh grade. They both attend St. Albert School in Council Bluffs, Iowa Bluffs. Some of her recreational activities include wallyball, jogging, country dancing, and cooking.

Matthew Hale

Matt is a graduate of Washington State University with a B.S. in Civil and Environmental Engineering. He has 8 years of service with the U.S. Army corps of Engineers.

Since 1991, Matt has promoted and supported computer-aided design and drafting (CADD) and geographical information systems (GIS) within the Department of Defense through workshops, task groups, reports, computer programming, and site visits. Prior to coming to the Tri-Service CADD/GIS Technology Center, he performed structural design at the Walla Walla District Corps of Engineers.

Matt is currently working on software implementations of CADD/GIS standards, Electronic Bid Solicitations, and Internet Applications. He knows serveral programing languages from MDL to PERL. He is currently the facilitator for the Systems/Communications Field Working Group.

IDQC for reproducing CDs

[redacted]

title, Pages 1 thru 6.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
ONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		BY (Signature of Contracting Officer)	

[redacted]

Amendments may be on one (1) or more floppies or on CD's. SWF will provide a preliminary master CD to be used for GLASS mastering and reproduction. Artwork will be standardized and provided for this specific purpose. The contractor will be responsible for maintaining and changing Project Name, Solicitation Number and Amendment Number on each order via digital art provided at start of contract.

3. AVERAGE ORDER - An average order will be approximately 150 CD's per master. An average order of an amendment will be approximately 150 CD's or Floppy Disks per master.

4. TURNAROUND TIME - COMPACT DISKS. The turnaround time required for the reproduction of each CD will be based on four turnaround times listed below and priced accordingly. All days, including holidays, shall be considered working days.

a. ACCELERATED TURNAROUND TIME. Accelerated turn around time is three (3) days and shall be determined from the date the Contractor receives the preliminary master. Therefore CD's received on Saturday shall be due the following Tuesday.

b. FIVE DAY TURNAROUND TIME. Five (5) days turnaround time shall be determined from the date the Contractor receives the preliminary master. Therefore, CD's received by the Contractor on Saturday for five (5) day turnaround shall be due the following Thursday.

[redacted]

be printed on the back side of the mailer. Self adhesive labels are acceptable.

9. ARTWORK. Digital artwork will be provided prior to any orders placed and used throughout the course of the contract unless revised by formal correspondence. The screening colors shall be Red (PMS 185) for the Castle logo with black lettering. Digital artwork for each media is located on Pages 5 and 6. The artwork will be placed on the CD by utilizing a silk-screening process. Self-adhesive labels are not acceptable and shall not be placed on the CD.

10. SHIPPING/DELIVERY. The master CD and master Floppy Disk will be sent directly from the FWD to the Contractor by Overnight/Next Day Mail and Contractor will return the final product via Overnight/Next Day Mail. If Contractor is in the local area, pickup and delivery may be made by courier.

11. MULTIPLE AWARDS. Multiple awards will be made from this solicitation. Delivery Orders will be alternated between each contractor.

12. INSPECTION. The Contractor is required to inspect the disks to ensure that the data on the pre-master disk provided by the Government is properly transferred to the master in accordance with ISD 9660 and the "Yellow Book" Industry Standard. A copy of the "Yellow Book" can be obtained from the following address:

ANSI
ATTN: Sales
1430 Broadway
New York, NY 10018
(212) 642-4900

Yellow Book: ISD 10149:1989

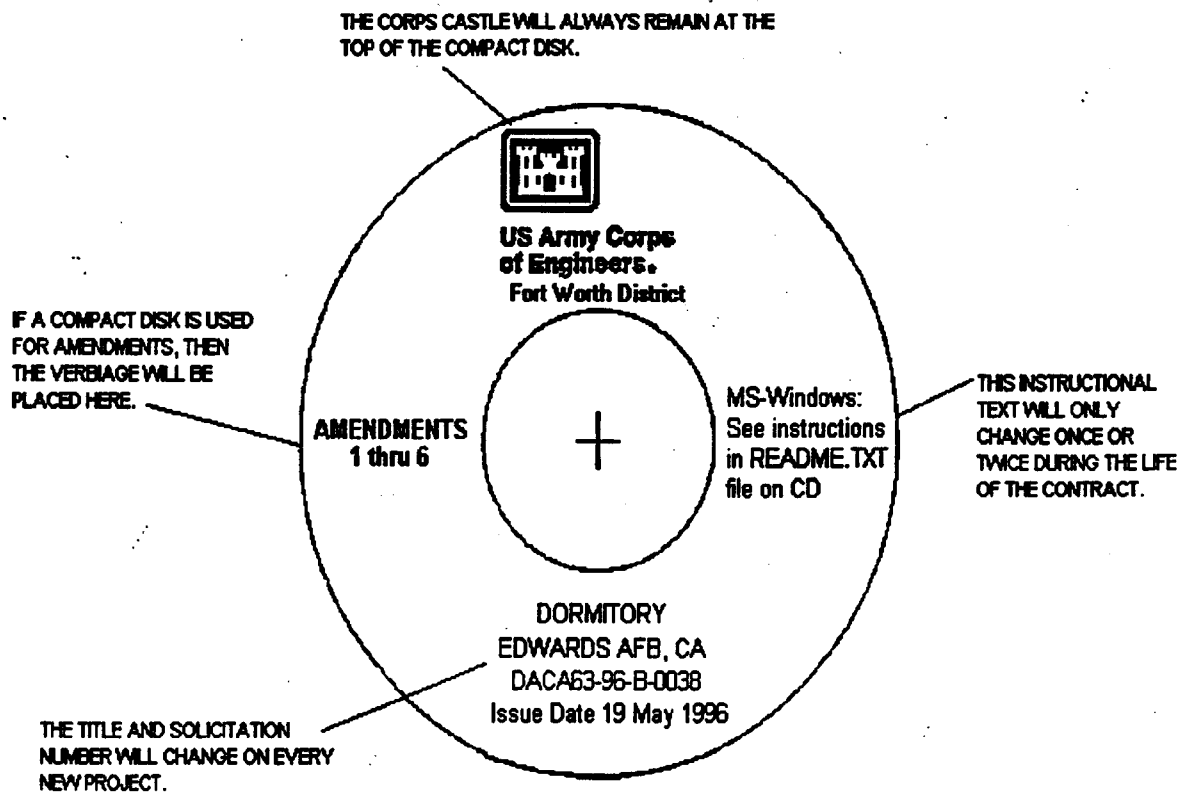
The contractor shall also ensure that "Data Verification" or a bit by bit comparison between the source CD or Floppy Disk and the reproduced CD or Floppy Disk is completed in order to maintain the level of quality required. The "Data Verification" report will be included with the delivery of the CD's or Floppy Disks. **Contractor must ensure that all copied disks provided to the Government do not have a computer virus.**

13. LIMITED WARRANTY. Contractor warrants that machine duplicated copies of software will perform exactly as the delivered programs themselves. All deliverables will be free of defects in materials and workmanship under normal use and service period of one (1) year from date of receipt.

14. CUSTOMER REMEDIES. Contractor assumes entire liability and will remedy any repair or replacement of defective (see above warranty) software or packaging that is returned to supplier within warranty period. Any replacement software will then be warranted for the remainder of the original warranty period.

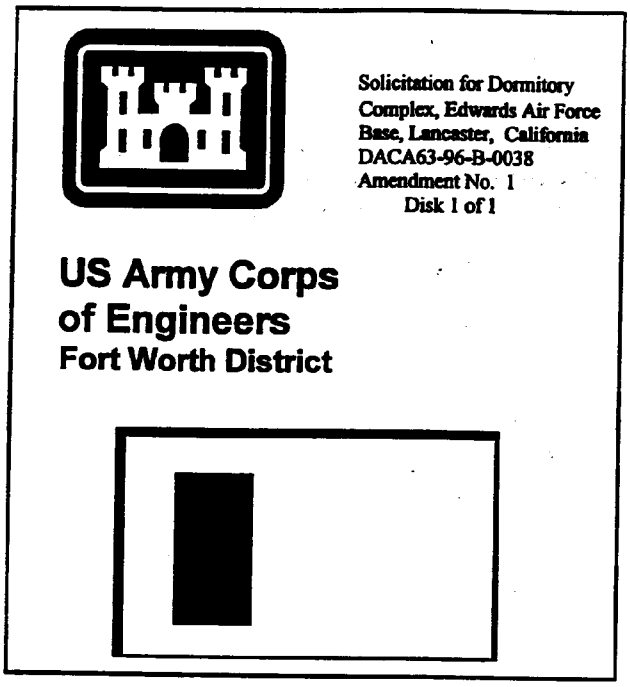
15. PROTECTION OF GOVERNMENT PROPERTY. The original CD and Floppy Disk furnished to the contractor is considered to be Government-furnished property. The Contractor will be responsible for loss of or damage to the CD or the Floppy Disk as prescribed in Clause 52.245-4 Government-Furnished Property (Short Form), added to FAR 52.212-4, Contract Terms and Conditions - Commercial Items.

LAYOUT OF THE COMPACT DISK FOR THE ORIGINAL SOLICITATION AND ANY AMENDMENTS



NOTE: There will only be two colors on the face of this compact disk. The Castle itself will be PMS 185 Red. All text will be black.

LAYOUT OF THE FLOPPY DISK LABEL



NOTE: The above castle and text will all be one color (black).

LAYOUT FOR THE LABEL WHICH WILL BE PLACED ON THE BACK OF EVERY MAILER

Each mailer for the compact disk and floppy disk shall have a label which identifies the project. This label will be placed on the back of the mailer and will look like the following:

Title:	**Dormitory Complex, Edwards Air Force Base, Lancaster, California**
Sol #:	**DACA63-96-B-0038**

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
	1 1

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
0002	09/19/96	W45XMA-6218-4277	

6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than Item 6)	CODE
US ARMY ENGINEER DISTRICT, FTW P O BOX 17300 CONTRACTING DIV 819 TAYLOR ST FT. WORTH TX 76102-0300 KAREN R SMITH CSA(817) 978-7471	DACW63		

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) Vendor ID: 20012578	(X)	9A. AMENDMENT OF SOLICITATION NO.
	X	DACW63-96-B-0127
		9B. DATED (SEE ITEM 11) 09/06/96
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE / FACILITY CODE		

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☒ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(X)	
	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103 (b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Solicitation No. DACW63-96-B-0127, IDQ Contract for Duplicating Compact Disks (CD ROM) and Floppy Disks for the Fort Worth District, Corps of Engineers, Fort Worth, Texas, is amended as follows:

BIDDING SCHEDULE, Remove Pages 3 of 28 thru 7 of 28, and replace with the attached Pages 3 of 28 thru 7 of 28.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY (Signature of Contracting Officer)	16C. DATE SIGNED

INDEFINITE DELIVERY CONTRACT FOR DUPLICATING COMPACT DISKS (CD ROM) AND FLOPPY DISKS FOR FORT WORTH DISTRICT, CORPS OF ENGINEERS, FORT WORTH, TEXAS

BIDDING SCHEDULE

Item No.	Description	Estimated Quantity	Unit	Unit Price	Extended Amount
BASE PERIOD - Contract Award through a twelve month period					
0001	**THREE (3) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0001AA	Produce Master Disk	5	CD	$_____	$_____
0001AB	Reproduction and Packaging	750	CD	$_____	$_____
0002	**FIVE (5) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0002AA	Produce Master Disk	9	CD	$_____	$_____
0002AB	Reproduction and Packaging	1,350	CD	$_____	$_____
0003	**SEVEN (7) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0003AA	Produce Master Disk	113	CD	$_____	$_____
0003AB	Reproduction and Packaging	16,950	CD	$_____	$_____
0004	**TEN (10) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0004AA	Produce Master Disk	23	CD	$_____	$_____
0004AB	Reproduction and Packaging	3,450	CD	$_____	$_____
0005	**TWENTY FOUR (24) HOUR TURN AROUND: 3.5 inch Floppy Disk - Master, Reproduce, and Package in Mailer**				
0005AA	Reproduction and Packaging	22,500	FD	$_____	$_____

TOTAL BASE PERIOD (ITEMS 0001 THRU 0005AA) $_____

ACCOMPANYING AMENDMENT 0002

BIDDING SCHEDULE

Item No.	Description	Estimated Quantity	Unit	Unit Price	Extended Amount
OPTION PERIOD 1 - Contract Award through a twelve month period					
0006	**THREE (3) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0006AA	Produce Master Disk	5	CD	$_____	$_____
0006AB	Reproduction and Packaging	750	CD	$_____	$_____
0007	**FIVE (5) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0007AA	Produce Master Disk	9	CD	$_____	$_____
0007AB	Reproduction and Packaging	1,350	CD	$_____	$_____
08	**SEVEN (7) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0008AA	Produce Master Disk	113	CD	$_____	$_____
0008AB	Reproduction and Packaging	16,950	CD	$_____	$_____
0009	**TEN (10) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0009AA	Produce Master Disk	23	CD	$_____	$_____
0009AB	Reproduction and Packaging	3,450	CD	$_____	$_____
0010	**TWENTY FOUR (24) HOUR TURN AROUND: 3.5 inch Floppy Disk - Master, Reproduce, and Package in Mailer**				
0010AA	Reproduction and Packaging	22,500	FD	$_____	$_____

TOTAL OPTION PERIOD 1 (ITEMS 0006 THRU 0010AA) $_____

ACCOMPANYING AMENDMENT 0002

BIDDING SCHEDULE

Item No.	Description	Estimated Quantity	Unit	Unit Price	Extended Amount
OPTION PERIOD 2 - Contract Award through a twelve month period					
0011	**THREE (3) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0011AA	Produce Master Disk	5	CD	$_____	$_____
0011AB	Reproduction and Packaging	750	CD	$_____	$_____
0012	**FIVE (5) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0012AA	Produce Master Disk	9	CD	$_____	$_____
0012AB	Reproduction and Packaging	1,350	CD	$_____	$_____
0013	**SEVEN (7) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0013AA	Produce Master Disk	113	CD	$_____	$_____
0013AB	Reproduction and Packaging	16,950	CD	$_____	$_____
0014	**TEN (10) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0014AA	Produce Master Disk	23	CD	$_____	$_____
0014AB	Reproduction and Packaging	3,450	CD	$_____	$_____
0015	**TWENTY FOUR (24) HOUR TURN AROUND: 3.5 inch Floppy Disk - Master, Reproduce, and Package in Mailer**				
0015AA	Reproduction and Packaging	22,500	FD	$_____	$_____
	TOTAL OPTION PERIOD 2 (ITEMS 0011 THRU 0015AA)				$_____

ACCOMPANYING AMENDMENT 0002

BIDDING SCHEDULE

Item No.	Description	Estimated Quantity	Unit	Unit Price	Extended Amount
OPTION PERIOD 3 - Contract Award through a twelve month period					
0016	**THREE (3) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0016AA	Produce Master Disk	5	CD	$_____	$_____
0016AB	Reproduction and Packaging	750	CD	$_____	$_____
0017	**FIVE (5) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0017AA	Produce Master Disk	9	CD	$_____	$_____
0017AB	Reproduction and Packaging	1,350	CD	$_____	$_____
0018	**SEVEN (7) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0018AA	Produce Master Disk	113	CD	$_____	$_____
0018AB	Reproduction and Packaging	16,950	CD	$_____	$_____
0019	**TEN (10) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer**				
0019AA	Produce Master Disk	23	CD	$_____	$_____
0019AB	Reproduction and Packaging	3,450	CD	$_____	$_____
0020	**TWENTY FOUR (24) HOUR TURN AROUND: 3.5 inch Floppy Disk - Master, Reproduce, and Package in Mailer**				
0020AA	Reproduction and Packaging	22,500	FD	$_____	$_____

TOTAL OPTION PERIOD 3 (ITEMS 0016 THRU 0020AA) $_____

ACCOMPANYING AMENDMENT 0002

BIDDING SCHEDULE

Item No.	Description	Estimated Quantity	Unit	Unit Price	Extended Amount
OPTION PERIOD 4 - Contract Award through a twelve month period					
0021	THREE (3) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer				
0021AA	Produce Master Disk	5	CD	$_____	$_____
0021AB	Reproduction and Packaging	750	CD	$_____	$_____
0022	FIVE (5) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer				
0022AA	Produce Master Disk	9	CD	$_____	$_____
0022AB	Reproduction and Packaging	1,350	CD	$_____	$_____
	SEVEN (7) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer				
0023AA	Produce Master Disk	113	CD	$_____	$_____
0023AB	Reproduction and Packaging	16,950	CD	$_____	$_____
0024	TEN (10) DAY TURN AROUND: Compact Disk - Master, Reproduce, and Package in mailer				
0024AA	Produce Master Disk	23	CD	$_____	$_____
0024AB	Reproduction and Packaging	3,450	CD	$_____	$_____
0025	TWENTY FOUR (24) HOUR TURN AROUND: 3.5 inch Floppy Disk - Master, Reproduce, and Package in Mailer				
0025AA	Reproduction and Packaging	22,500	FD	$_____	$_____

TOTAL OPTION PERIOD 4 (ITEMS 0021 THRU 0025AA) $_____

GRAND TOTAL BASE PERIOD PLUS OPTION PERIODS 1, 2, 3, & 4 $_____

ACCOMPANYING AMENDMENT 0002

Workshop Survey

EBS - Workshop Survey

Please take a moment to answer the survey report. It is important that we get the necessary feedback from our class in order to improve future workshops. Your opinion is important to the overall accomplishment of our mission.

1. Do you feel the overall presentation on EBS (Electronic Bid Solicitations) was:
   a) Informative b) Somewhat Informative c) No Help whatsoever

2. Were the training materials provided helpful in understanding the material?
   a) Yes b) No

3. Which training methods were most helpful?
   a) Hands-on b) Lectures

4. Were the instructors knowledgeable and helpful throughout the workshop?
   a) Yes b) No

5. Is your District/Location currently set-up to handle EBS?
   a) Yes b) No

6. What portion(s) of the course was boring?

7. What can we do to improve this workshop?

8. What method of communication would you like to see in place for disseminating information regarding EBS?

9. What did you learn from this workshop?

10) Please list your likes and dislikes concerning the overall process of this workshop. (PLEASE BE HONEST)